

**THE ECONOMIC EFFICIENCY AND  
POLLUTION REDUCTION ACT OF 1996**

David Morris

Testimony Before the House Committee on Taxes  
In Support of HF 3063

February 15, 1996



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The Institute for Local Self-Reliance (ILSR) is a nonprofit research and educational organization that provides technical assistance and information on environmentally sound economic development strategies. Since 1974, ILSR has worked with citizen groups, governments and private businesses in developing policies that extract the maximum value from local resources.

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My name is David Morris. I am Vice President of the Minneapolis based Institute for Local Self-Reliance and the author of several reports on environmental tax policies.

I appreciate the opportunity to speak before this Committee in support of H.F. 3063, the Economic Efficiency and Pollution Reduction Act of 1996 (EEPR).

This bill ventures into new territory for the state of Minnesota. Yet it also reflects a growing body of opinion locally, nationally and internationally that our tax systems need to be restructured so that they take into account not only the needs of the present generation but the needs of future generations.

There are two principles underlying this bill. One is that when we tax something we raise its cost. When we raise its cost we use less of it. Currently we tend to overtax activities we would like to encourage, so called "goods" like investment and work and property. And we tend to undertax activities we would like to discourage, so called "bads" like inefficiency and pollution and the depletion of natural resources.

Thus our tax system has a built-in efficiency. This bill tries to correct that problem. And in so doing, it raises the cost of inefficiency and pollution and lowers the cost of work and investment and property.

There is another principle at work in this bill. A market economy works most effectively if the consumers can rely on accurate price signals. The price we pay for many of our goods does not reflect their real environmental and social cost. This is especially true for fossil fuels. This bill begins to internalize some of the real environmental costs into the price we pay for fossil fuels.

I applaud the Chair of this Committee for being willing to take the political risk of offering this bill as a concrete starting point for discussions. It is an extremely important step forward but it is also a work-in-progress.

Some people with whom I've talked rejected this kind of bill out of hand. I hope they reconsider. The vast majority of the people with whom I have spoken during the year since I presented the idea of a tax shift to this Committee in a special hearing last February, including labor representatives, officials at the Federal Reserve Bank, representatives of the low-income community and businesspeople, have found the concept intriguing and wanted to see something specific. This bill is a well-crafted and workable concrete response to their requests.

## **EEPR: Part of a Worldwide Movement**

This bill's introduction is not an isolated event. There is a significant amount of activity going on in the environmental tax policy arena.

- In 1994 the Minnesota legislature required the Public Utilities Commission to quantify the environmental cost of electric power generation. In early 1995 the Minnesota Department of Public Service submitted to the PUC its expert estimates of

the environmental cost of pollution from electric power plants. Those estimates form the basis for the \$1.5 billion tax shift proposed in EEPRA.

- In 1994 the Minnesota Pollution Control Agency conducted a study of the feasibility of using air pollutant emission fees to reduce air pollution. It concluded that it is both technically and economically feasible. The study included a survey of Minnesota households. A high percentage of the respondents agreed with the principle that those who cause pollution should pay for its harmful effects, even if this means that the respondents themselves would have to pay higher prices for goods and services.

- In June 1995 the Governor's Sustainable Development Initiative issued its report, *Challenges for a Sustainable Minnesota: A Minnesota Strategic Plan for Sustainable Development*. That report, the fruit of two years of discussions among more than 100 business, agriculture and environmental leaders in Minnesota, contained relatively few concrete recommendations. One of these is to "Encourage growth of sustainable manufacturing by reducing business taxes, fees and regulations while increasing fees for waste and pollution."

- Next month the President's Council on Sustainable Development will issue its report on how to best protect the environment while promoting a healthy economy. The Council's members include a wide array of distinguished participants. On the business side these include Dow Chemical, Georgia Pacific, Chevron and many other corporations. One of the Council's reported recommendations is to conduct a comprehensive review of taxes and corporate subsidies, aimed at increasing taxes on pollution and consumption in exchange for cutting income taxes.

- At the state and national level both political parties have submitted legislation to shift taxes away from property or income or investment and toward consumption. This bill includes a consumption tax but only on forms of consumption we would like to discourage.

- At the international level tax shifting is on the agenda of perhaps half a dozen nations, most of them in northern Europe. Since 1990, the European Union has been discussing the imposition of a continental wide carbon and energy tax beginning at \$3 per barrel and rising to \$10 per barrel in the year 2000. Last year, due to its inability to impose a uniform European wide tax, the European Commission issued a set of guiding principles regarding environmental taxes and encouraged individual countries to design their own strategies.

- Several countries are moving ahead. On January 1 of this year the Netherlands imposed a 2.28 cents per kWh ecotax on electricity and 11 cents per cubic meter of natural gas. The first 800 kWh of electricity and the first 800 cubic meters of gas are tax free. The money generated by the measure is returned to the public through various tax breaks, including a reported 10 percent reduction in income taxes.

Germany, Denmark, Sweden, and Norway are all examining various kinds of tax shifts.

Thus this tax shift bill may be an idea whose time has come.

### **The Economic Efficiency and Pollution Reduction Act of 1996**

EEPRA begins to restructure the Minnesota tax system so that it reduces the cost of job creation and business investment and increases the cost of inefficiency and pollution. EEPRA is designed to be revenue neutral and sectoral neutral. The first

means that all additional revenues generated from pollution taxes will be returned in lower taxes on property and payroll. The second means that any additional revenues generated from the household sector should be returned to the household sector. Any additional revenues generated from the business sector should be returned to the business sector.

EEPRRA holds sectors harmless and it is revenue neutral on a statewide basis. But it doesn't hold individual households or firms harmless and it is not revenue neutral on an individual basis. Households that use energy more efficiently will make money from this tax shift, that is, they will see their overall tax burden go down. Households that waste energy will lose money. The same holds for farmers and manufacturers and other enterprises.

Let me briefly address some of the key questions raised by those with whom I've spoken.

- *Where does the \$1.5 billion figure come from?*

The \$1.5 billion figure is based on estimates of the cost of pollution submitted by the Minnesota Department of Public Service (DPS) to the Public Utilities Commission (PUC). The DPS estimated the cost of pollution from electric power generation. The Institute for Local Self-Reliance extrapolated those estimates, assuming that the same pollutant generated from automobiles or space heating would have the same cost. The costs were then translated into a carbon tax of \$50 per ton of carbon emissions.

The debate about what the precise cost of pollution is continues to be vigorous. Yet I believe that almost all parties to the PUC proceeding, including utilities, agreed that there is some uninternalized cost to pollution.

- *Why a carbon tax?*

The carbon tax is relatively easy to administer compared to a tax on each individual pollutant. Moreover, a carbon tax is a pollution tax in that it serves as an excellent surrogate for almost all forms of pollution. The single largest generator of mercury emissions is coal fired power plants. Sulfur emissions occur largely by burning coal or diesel fuels. A significant percentage of volatile organic compound emissions come from burning fossil fuels. Thus this truly is a pollution tax.

<b>Sector</b>	<b>CO</b>	<b>SOx</b>	<b>VOC</b>	<b>PM</b>	<b>NOx</b>	<b>CO2</b>	<b>Mercury</b>	
Transportation	70.0	4.8	30.1	21.6	38.7	31.8	n/a	
Industry	7.6	15.2	46.6	34.4	3.2	11.3	2.0	
Electricity	1.0	68.0	2.0	5.0	36.0	34.6	35.0	
Space/Water Heating	6.5	11.8	2.0	20.9	20.4	19.3	n/a	
Miscellaneous	14.9	0.2	19.3	18.1	1.7	3.0	63.0	
<b>Total:</b>	<b>100</b>							

n/a indicates not available

When fully phased in after 5 years, a \$50 per ton carbon tax translates into a 13 cent per gallon tax on gasoline and fuel oil, about a 1.2 cent per kWh tax on electricity and a 15 cent per thousand cubic feet tax on natural gas.

There are some who prefer an energy tax, that is a Btu tax based on the energy content of fuel rather than a carbon tax. These observers are concerned about the disproportionate impact of a carbon tax on coal versus other fossil fuels like natural gas. In Europe a compromise ecotax has been one that is 50 percent based on energy content and 50 percent based on carbon content. An energy tax would be as easy to administer as a carbon tax.

***• Why does the bill tax nuclear power, since nuclear power generates no carbon emissions?***

EEPRA taxes pollution. Nuclear power plants certainly generate pollution in the form of long lasting and highly lethal radioactive wastes. Nuclear electric customers already pay a small tax of .1 cent per kWh for decommissioning the nuclear plant and another .1 cent per kWh for storing the radioactive wastes. The actual cost of both decommissioning the plant and permanently storing and guarding its radioactive wastes may be much higher.

There is another reason to tax nuclear power. Exemption nuclear power gives uranium a decided advantage over other fuels. Given the temporary and conditional status this legislature has given to the continued generation and storage of radioactive wastes at Prairie Island, this would represent an inconsistency in state policy.

***• How can the carbon tax on gasoline be part of a revenue neutral tax shift if the Minnesota Constitution requires that all gas tax money be spent on road maintenance and construction?***

At least one state tax on gasoline is used for purposes that appear outside of those prescribed by the Constitution: the 1 cent per gallon tax used to pay for cleaning up pollution left by leaking tanks from gas stations.

The Constitutional dedication of gas taxes makes them a form of "brown tax". That is, the tax is solely used to increase the consumption for gasoline. Among EEPRA's purposes is to reduce pollution. Given that EEPRA is a tax on carbon emitted by a wide range of fuels, and given the contradiction of a part of it being used to increase pollution, the courts may well decide that the tax on gasoline can be used for a tax shift. If they do not, a state Constitutional Amendment may be required.

***• Won't Minnesota power plants be at a disadvantage compared to out of state plants because of the carbon tax?***

The tax on electricity is imposed on the consumer, not the producer. Thus there is no advantage to a utility or independent power producer setting up a plant in South Dakota if that plant serves Minnesota.

***• EEPRA expects to reduce pollution by raising its cost. Won't that reduce state tax revenues?***

A \$1.5 billion tax shift represents 5-7 percent of state and local tax revenues. The bill would not make schools or other public services dependent on pollution taxes. Initial studies indicate that the tax shift could reduce pollution by a modest 3-8 percent when fully phased in.

Pollution taxes internalize real costs that will be paid by Minnesotans either up front

or in the back end. If we reduce pollution we avoid real costs.

If Minnesotans reduce pollution by improving their appliances or homes or factories or cars' fuel efficiencies or if they shift to renewable fuels they will tend to strengthen the state economy. Improved efficiencies will reduce the money that leaves the state for these imports. Minnesota now exports over \$2.9 billion from the state to pay for imported fossil fuels. Investments in homegrown renewable fuels will also keep money in the state economy.

A tax shift, if properly designed, could expand the state economy. Preliminary calculations based on computer models used by Minnesota state agencies found that a payroll tax reduction could stimulate increase employment and expand the state economy. Increased tax revenues could result from this expanded economic activity.

- *What will be the impact of the pollution tax on Minnesota's renewable resources?*

EEPRAs will change the comparative economics of renewable and non-renewable fuels. A \$50 per ton carbon tax would raise the cost of electricity from a coal fired power plant by about 1.5 cents per kWh. A gas-fired power plant would pay a much lower penalty per kWh. By imposing a carbon tax, wind energy could become competitive without federal incentives. A \$50 per ton carbon tax translates into a 13 cent per gallon tax on gasoline. This would allow the state ethanol subsidy to be cut by half.

- *What will be the net impact of the combined carbon tax and property and payroll tax reduction on the typical household?*

As Table A indicates, the typical Minnesota household will see its energy costs increase by about \$263 per year. It may also pay small increases in the price of energy intensive products.

<b>Table A: Costs and Benefits of EEPRAs for a Minnesota Household</b>			
<b>Increase in the Cost of Energy From a \$50 per Ton Carbon Tax</b>			
<b>Sector</b>	<b>Current Consumption</b>	<b>Current Expenditures</b>	<b>After Tax Shift</b>
Motor vehicle (gallons)	1000	\$1200.00	\$1332.00
Electricity (kWh)	7,505	\$535.86	\$648.43
Natural Gas (Mcf)	122	\$647.82	\$666.12
Total Direct Energy Expenditures		\$2,383.68	\$2,646.55
		<b>Total Tax Increase</b>	<b>\$262.87</b>
<b>Decrease in Taxes From a 19% Reduction in Property Taxes and a 7.5% Reduction in Payroll Taxes</b>			
<b>Category</b>	<b>Current Taxes</b>	<b>After Tax Shift</b>	
Payroll Income (\$25,000)	\$1,912.50	\$1,769.06	
Property Value (\$72,000)	\$720.00	\$583.20	
	<b>Total Tax Decrease</b>	<b>\$280.24</b>	

If we look on the tax reduction side of the equation and assume the head of the household earns the state average salary of \$25,000 a year and the home is valued at \$75,000, that person will receive back about the same amount in tax breaks.

- *What is the impact on low income households of EEPRA?*

Poorer households tend to inherit the hand-me-downs of society, the used houses, used cars, used refrigerators. Because of improved regulations in the past 15 years, the newest generation of houses and cars and appliances are much more energy efficient than their predecessors. Thus low income people tend to inherit a physical stock that is the most expensive to operate.

Assuming about 520,000 low income households in Minnesota, preliminary estimates are that a \$50 per ton tax on carbon would increase the total amount the low income community pays for energy by about \$140 million. EEPRA appropriates \$80 million in additional moneys for fuel assistance and weatherization programs for low income households. Low income households would also significantly benefit from the property and payroll tax reductions contained in the bill.

However, a low income renter would be unlikely to receive back the full property tax reduction given to the owner of the house and the unemployed renter would not benefit from payroll tax reductions.

As presently structured, EEPRA offers a percentage reduction in both property taxes and payroll taxes. That inevitably provides the greatest reward to those who earn the most money and have the most expensive houses.

A wage earner making \$60,000 a year who received the same 7.5% reduction in payroll tax would get back \$344 compared to the \$143 reduction for the worker earning \$25,000 a year. The owner of a \$150,000 home would receive about \$300 more than the owner of a \$75,000 home.

Thus it seems that further refinement of the tax rebate measures might be warranted. One possibility would be to return the money in equal payments per household and per worker rather than as a percentage reduction. This idea, called an "ecobonus" is being considered in Germany. If the property tax reduction were given back to every household equally each household would receive about \$220. If the payroll tax reductions were given back to each worker equally each worker would receive about \$170.

Returning the pollution taxes in equal increments per household would modestly benefit the low income sector. The elderly, who tend to use less energy and occupy smaller households, might benefit the most.

- *What is the impact of EEPRA on Minnesota's business community?*

Some of the fastest growing sectors of the Minnesota economy are in the labor intensive, knowledge intensive sectors like medical services. But Minnesota also has significant numbers of high paid workers in energy intensive, resource extracting industries.

The challenge is to fashion a tax shift that encourages the industries of the future

without penalizing the industries of the present. EEPRA intends to be sectoral neutral with the additional tax revenue generated by the pollution tax return on businesses returned to businesses in tax reductions. Within the business sector the challenge is how to have a kind of horizontal equity, that is, to avoid transferring tax revenue from the manufacturing sector to the service sector.

Based on a preliminary analysis by the Tellus Institute using the Implan Model, Minnesota businesses in aggregate will pay about \$500 million more in pollution taxes under EEPRA. This is about one third of the \$1.5 billion estimated to be raised by EEPRA and is very close to the proportion of pollution the state has estimated that the commercial and industrial business community generates, 39 percent. This figure is arrived at by adding together the percentage of carbon emissions generated by the commercial, industrial, and agricultural sectors and about one half of the electric/steam sector. (See Table B).

<b>Sector</b>	<b>Emissions (000's Tons)</b>	<b>Percentage</b>
Residential	2,833	11.6%
Commercial	1,901	7.8
Industrial	2,752	11.3
Agricultural	734	3.0
Transportation	7,755	31.8
Electric/Steam	8,448	34.6
<b>Total</b>	<b>24,423</b>	<b>100.0</b>

Table C shows the impact of taking the \$500 million in increased fuel costs imposed on Minnesota businesses and returning it to them in the form either of reduced business property taxes or of reduced employer payroll taxes.

The table shows the impact on selected sectors. It shows that in the vast majority of cases the net increase or decrease in the production costs of the industry due to the proposed tax shift is modest. It also shows that in a number of industries it makes a significant difference as to whether the money is returned in the form of property tax reductions or payroll tax reductions.

Unsurprisingly, the table shows that labor intensive industries like those involved in research and development or banking or medical services would benefit from the tax shift while some industries, like the refining of petroleum products or the production of nitrogen fertilizers or the extraction of iron ores, would suffer a significant net tax increase. I hope individual firms in Minnesota undertake their own analysis of the impact of EEPRA on their own operations.

Minnesota has significant high wage employment in resource extracting and energy intensive industries like paper and steel and taconite mills. We need to fashion a bill that encourages the industries of the future while not penalizing the industries of the present and the past.

In recognition of the potential burden to energy intensive industries, EEPRA offers a tax cap. No firm will be required to pay increased taxes greater than 1 percent of sales. It may be necessary to lower that tax cap on businesses.

We should emphasize that EEPRA will reward more efficient producers and households. The overall impact of the carbon tax portion of EEPRA will be to raise energy costs by 6-15 percent. Many studies show that businesses and households can improve their energy efficiencies by that much with investments that repay themselves quickly.

- *Wouldn't it be better to wait until the federal government adopts a tax shift?*

There is no compelling reason to wait. Most observers now agree that states are more capable than the federal government in fashioning innovative and effective new public policies. As noted above, in Europe several nations like the Netherlands and Denmark that are embracing tax shifts have internal economies not much larger than that of Minnesota. They are not waiting for the European Union to adopt a tax shift even though the economic and competitive relationship of Denmark to France today is about the same as that of Minnesota versus Wisconsin.

If a tax shift occurs in this country it probably will occur first at the state level. This is the level that allows all participants to sit at the table, express their hopes and their concerns, roll up their sleeves, and fashion the very best bill. That has been a tradition in Minnesota. I hope we can apply that tradition to the idea of an ecological tax shift.

Thank you.

**Table C: Impact of Tax Shift On Selected Minnesota Business Sectors**

	Increase as a % of Production Costs	Decrease as a % of Production Costs	Net Increase/Decrease	Decrease as a % of Production Costs	Net Increase/Decrease
Industry	Carbon Tax	Property Tax Scenario	Property Tax Scenario	Payroll Tax Scenario	Payroll Tax Scenario
1 Dairy Farm Products	0.26%	-0.16%	0.10%	-0.08%	0.18%
2 Poultry And Eggs	0.19%	-0.06%	0.13%	-0.07%	0.12%
7 Hogs, Pigs And Swine	0.14%	-0.31%	-0.16%	-0.11%	0.04%
12 Feed Grains	0.12%	-0.36%	-0.24%	-0.07%	0.05%
18 Vegetables	0.11%	-0.20%	-0.08%	-0.06%	0.06%
28 Iron Ores	2.51%	-0.53%	1.98%	-0.23%	2.28%
41 Sand And Gravel	0.81%	-0.47%	0.34%	-0.26%	0.55%
48 New Residential Structures	0.14%	-0.17%	-0.03%	-0.26%	-0.13%
72 Flour And Other Grain Mill Products	0.36%	-0.15%	0.21%	-0.25%	0.10%
87 Soybean Oil Mills	0.39%	-0.32%	0.07%	-0.14%	0.25%
134 Sawmills And Planing Mills, General	0.55%	-0.25%	0.31%	-0.23%	0.33%
137 Millwork	0.22%	-0.16%	0.05%	-0.32%	-0.10%
162 Paper Mills, Except Building Paper	1.28%	-0.25%	1.04%	-0.24%	1.04%
174 Newspapers	0.11%	-0.09%	0.01%	-0.32%	-0.21%
179 Commercial Printing	0.24%	-0.14%	0.10%	-0.28%	-0.04%
189 Inorganic Chemicals N.E.C.	1.59%	-0.24%	1.35%	-0.22%	1.38%
200 Paints And Allied Products	0.36%	-0.08%	0.28%	-0.17%	0.19%
202 Nitrogenous And Phosphatic Fertilizers	3.92%	-0.18%	3.74%	-0.17%	3.75%
231 Glass Containers	1.09%	-0.25%	0.84%	-0.27%	0.82%
242 Concrete Block And Brick	0.45%	-0.46%	-0.01%	-0.24%	0.21%
254 Blast Furnaces And Steel Mills	2.66%	-0.24%	2.42%	-0.23%	2.42%
263 Secondary Nonferrous Metals	1.01%	-0.25%	0.76%	-0.18%	0.83%
282 Fabricated Structural Metal	0.23%	-0.14%	0.09%	-0.25%	-0.02%
290 Iron And Steel Forgings	0.78%	-0.20%	0.58%	-0.30%	0.49%
309 Farm Machinery And Equipment	0.27%	-0.14%	0.13%	-0.25%	0.02%
328 Paper Industries Machinery	0.22%	-0.13%	0.09%	-0.27%	-0.06%
330 Food Products Machinery	0.17%	-0.12%	0.05%	-0.32%	-0.15%
347 Refrigeration And Heating Equipment	0.24%	-0.13%	0.10%	-0.26%	-0.02%
362 Household Refrigerators And Freezers	0.27%	-0.13%	0.15%	-0.25%	0.03%
376 Printed Circuit Boards	0.19%	-0.14%	0.05%	-0.33%	-0.14%
384 Motor Vehicles	0.19%	-0.22%	-0.03%	-0.17%	0.01%
395 Motorcycles, Bicycles, And Parts	0.12%	-0.09%	0.04%	-0.25%	-0.12%
442 Radio And Tv Broadcasting	0.06%	-0.33%	-0.28%	-0.30%	-0.24%
450 Food Stores	0.13%	-0.86%	-0.73%	-0.39%	-0.26%
454 Eating & Drinking	0.25%	-0.41%	-0.17%	-0.32%	-0.08%
456 Banking	0.14%	-0.35%	-0.20%	-0.32%	-0.18%
463 Hotels And Lodging Places	0.21%	-0.54%	-0.33%	-0.37%	-0.16%
464 Laundry, Cleaning And Shoe Repair	0.27%	-0.16%	0.11%	-0.32%	-0.06%
475 Computer And Data Processing Services	0.06%	-0.11%	-0.05%	-0.36%	-0.30%
490 Doctors And Dentists	0.05%	-0.08%	-0.02%	-0.43%	-0.38%
492 Hospitals	0.16%	-0.09%	0.06%	-0.43%	-0.27%
493 Other Medical And Health Services	0.18%	-0.14%	0.04%	-0.27%	-0.09%
494 Legal Services	0.07%	-0.19%	-0.11%	-0.31%	-0.23%
496 Colleges, Universities, Schools	0.17%	-0.16%	0.01%	-0.43%	-0.26%
509 Research, Development & Testing	0.06%	-0.15%	-0.09%	-0.47%	-0.41%