



Initiative 1631: Putting a Price on Carbon

Briefly

This November, voters are being asked to approve Initiative 1631, which would impose a fee on fossil fuels sold or used in the state. The fee would be based on the quantity of greenhouse gases released when the fuel is combusted. The initial rate for the fee would be \$15 per carbon dioxide equivalent metric ton. The fee would increase annually by \$2 per metric ton plus an adjustment for inflation. Proceeds from this fee would be used to fund yet-to-be-identified programs aimed at reducing carbon emissions, improving climate resilience, and mitigating the impact of climate change on disproportionately affected populations.

Many people worry that global warming due to accumulations of greenhouse gases in the atmosphere will harm the planet and that efforts to address such impacts will impose significant costs on the world economy in future years. Frustration with the lack of action to address the impacts of climate change at the national level has led to pushes at the state level.

In November 2016, voters were asked to approve Initiative 732, which would have imposed a tax on greenhouse gas emissions. Proceeds from this tax would have been used to reduce other taxes. Voters rejected this initiative (41 percent for to 59 percent against).

This November, voters are being asked to approve Initiative 1631, which would impose a fee on greenhouse gas emissions. Proceeds from this fee would be used to fund yet-to-be-identified programs aimed at reducing carbon emissions, improving climate resilience, and mitigating the impact of climate change on disproportionately affected populations.

Background

In the 1970s economists developed a powerful critique of the heavy-handed command and control techniques then

being used to reduce pollution. They argued it would be possible to achieve much greater reductions in emissions at much lower costs if people who polluted were simply charged a price for doing so. The price would provide an incentive to reduce pollution. Decentralized decision-making would then lead to more cost effective decisions as to where and how to reduce pollution (Kneese and Schultze 1975).

The economist William Nordhaus, who was recently awarded the Nobel Prize in Economics, explains advantages of the pricing approaches to regulation of carbon dioxide and other greenhouse gases:

To a first approximation, raising the price of carbon is a necessary and sufficient step for tackling global warming. The rest is at best rhetoric and may actually be harmful in inducing economic inefficiencies.
(Nordhaus 2008)

I-732's tax and I-1631's fee are both intended to put a price on carbon. Though in one case the price is called a tax and in the other it is called a fee, their economic effects as prices are the same.

In 2008 the Legislature set three aggressive greenhouse gas emissions goals for

the state:

- To reduce overall emissions of greenhouse gases in the state to 1990 levels by 2020,
- To reduce overall emissions of greenhouse gases in the state to 25 percent below 1990 levels by 2035,
- To reduce overall emissions of greenhouse gases in the state to 50 percent below 1990 levels by 2050.

The 2008 legislation setting these goals included no enforcement mechanisms, however. To help reach the goals, in 2011, the state reached an agreement with TransAlta Corporation to phase out generation of electricity from coal at its Centralia plant. The plant's Unit 1 will

stop using coal by the end of 2021; the plant's Unit 2, by the end of 2025.

According to inventories prepared by the Department of Ecology, in 2013 (the most recent year for which an estimate is available), state emissions totaled 94.4 million metric tons. This is 6.8 percent greater than the 88.4 million metric tons emitted in 1990. (Over the period, however, the state's population grew 41 percent, from 4.9 million to 6.9 million, so that per capita emissions actually decreased by 34 percent.)

I-1631 Pollution Fee

Beginning Jan. 1, 2020, the initiative would impose a fee on fossil fuels sold or used in the state and on electricity generated in or imported into the state. The fee would be based on the quantity of greenhouse gases released when the fuel is combusted. The initial rate for the fee would be \$15 per carbon dioxide equivalent metric ton. The fee would increase annually by \$2 per metric ton plus an adjustment for inflation measured by the consumer price index for urban wage earners and clerical workers published by the Bureau of Labor Statistics. The \$2 portion of the annual increase would be suspended when the 2035 goal has been met and the state is on a trajectory to meet the 2050 goal.

Exemptions

I-1631 provides a number of exemptions from the fee, including: fuels brought into the state in the fuel tank of a vehicle, fuels exported from the state, fuels sold to a utility for generating electricity (the electricity itself is subject to the tax), fuels sold to various governmental entities, aircraft and maritime fuels, activities of Indian tribes and individual Indians, diesel and aircraft fuel used for agricultural purposes, "coal closure facilities" and fuel and electricity used by facilities in "energy-intensive and trade-exposed" (EITE) sectors. Coal closure facilities are coal-burning electric power plants (e.g. Transalta's Centralia plant) that have legally binding agreements to

EITE sectors exempted from I-1631's fee

- 311411: Frozen fruit, juice, and vegetable manufacturing;
- 311423: Dried and dehydrated food manufacturing;
- 311611: Animal (except poultry) slaughtering;
- 322110: Pulp mills;
- 322121: Paper (except newsprint) mills;
- 322122: Newsprint mills;
- 322130: Paperboard mills;
- 325188: All other basic inorganic chemical manufacturing;
- 325199: All other basic organic chemical manufacturing;
- 325311: Nitrogenous fertilizer manufacturing;
- 327211: Flat glass manufacturing;
- 327213: Glass container manufacturing;
- 327310: Cement manufacturing;
- 327410: Lime manufacturing;
- 327420: Gypsum product manufacturing;
- 327992: Ultra high purity silicon manufacturing;
- 331111: Iron and steel mills;
- 331312: Primary aluminum production;
- 331315: Aluminum sheet, plate, and foil manufacturing;
- 331419: Primary smelting and refining of nonferrous metal (except copper and aluminum);
- 334413: Semiconductor and related device manufacturing;
- 336411: Aircraft manufacturing;
- 336413: Other aircraft parts and auxiliary equipment manufacturing.

curtail emissions by the end of 2025. EITE sectors are specified in existing Department of Ecology regulations (see the box on page 2).

Credits

An electric or gas utility may receive credits against its pollution fee obligation for investments made pursuant to a clean energy investment plan that has been approved by either the Utilities and Transportation Commission (if the utility is investor owned) or the Department of Commerce (if the utility is consumer owned).

For electricity or fossil fuels that are subject to both Washington’s pollution fee and a similar fee out of state, the payer may take a credit against the amount owed in Washington for the amount paid elsewhere.

State Fiscal Impact

The state Office of Financial Management (OFM) has produced a fiscal analysis of the initiative. OFM projects that the pollution fee would generate \$238 million for state government in its first fiscal year, FY 2020. (The fiscal year runs from July 1 to June 30.

The state would begin receiving funds in February 2020.) Receipts would jump to \$610 million in FY 2021, when the fee would be effective for the full year. Revenue would then increase by \$76.4 million in FY 2022 and \$74.6 million in FY 2023, the final year of OFM’s horizon. (OFM 2018)

However, OFM’s analysis misses what would be a significant channel of impact

on state revenues in the long run: The carbon fee would increase the prices of gasoline and other motor fuels. Because of these price increases, the quantities of fuels purchased by motorists would decline and this, in turn, would reduce receipts from the state’s gasoline and special fuels taxes. The model that the state uses to estimate the economic impact of taxes on carbon assumes that the long run elasticity of demand for motor fuel is $-.06$. (This implies that a 10 percent increase in the price of motor fuel will result in a 6 percent decrease in the quantity purchased.) The elasticity of demand is much lower in the short run. Thus the short run impact on fuel tax revenues would be small. However, by 2029, the horizon of the current Transportation Revenue Forecast, a 9 percent increase in fuel prices due to the pollution fee could reduce sales by 5.4 percent.

Effect on Prices

We project that the pollution fee would increase from its initial value of \$15 per metric ton in 2020 to \$61.70 in 2035. The inflation forecast we use in projecting annual increases in the fee is from the consultancy IHS Global Insight, which provides national forecasts to the state Economic Revenue and Forecast Council. IHS Global Insight’s long run inflation forecast is a bit lower than the average in the Federal Reserve Bank of Philadelphia’s Livingston Survey of economic forecasts.

The pollution fee would be passed through fully into the prices paid by households and businesses for various fuels. (And the economic argument for putting a price on carbon assumes that

State Revenue from Pollution Fee (millions)			
FY 2020	FY 2021	FY 2022	FY 2023
\$238.4	\$610.0	\$686.4	\$761.0

Source: OFM

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	Impact on Prices					
	2020	2023	2026	2029	2032	2035
I-1631 Fee per Metric Ton	\$15.00	\$22.39	\$30.58	\$39.78	\$50.17	\$61.70
Fee on Gasoline (10% Ethanol) per Gallon	12.0¢	17.9¢	24.4¢	31.8¢	40.1¢	49.3¢
Fee on Gasoline (Ethanol-free) per Gallon	13.3¢	19.9¢	27.2¢	35.4¢	44.6¢	54.9¢
Fee on Diesel/Home Heating Oil per Gallon	15.2¢	22.7¢	31.1¢	40.4¢	51.0¢	62.7¢
Fee on Natural Gas per Therm	8.6¢	12.9¢	17.6¢	22.9¢	28.9¢	35.5¢
Fee on Propane per Gallon	8.0¢	11.9¢	16.2¢	21.1¢	26.6¢	32.7¢

Source: Washington Research Council

the price will be passed through.) The impacts on various fuels is shown in the table on page 3. In terms of a gallon of gasoline containing 10 percent ethanol, the fee would go from 12 cents in 2020 to 49 cents in 2035. For ethanol-free gasoline (which is available in some stations in the Seattle area), the fee would go from 13 cents to 55 cents. For a therm of natural gas, the fee would go from 9 cents to 36 cents.

Spending the Money

The initiative would establish four new accounts in the state treasury: the clean up pollution fund, the clean air and clean energy account, the clean water and healthy forests account and the healthy communities account.

I-1631 would initially direct all revenues from the carbon fee into the clean up pollution fund. Funds in the account could be used to cover “reasonable ad-

ministrative costs.” Net of these administrative expenses, 70 percent of revenues would then be directed to the clean air and clean energy account, 25 percent to the clean water and healthy forests account and 5 percent to the healthy communities account.

Public Oversight Board. Section 10 of the initiative would establish a Public Oversight Board “to ensure the timely, effective and efficient implementation of its provisions.” This board would make recommendations to the governor and Legislature as to how the money from the three accounts within

the clean up pollution fund would be spent. The chair of the board, appointed by the governor, would be a full-time staff person within the executive office on the governor. The board would have 15 voting members and three nonvoting members. The voting members would include the chair, the commissioner of public lands, the directors of the departments of commerce and ecology, the director of the recreation and conservation office, two cochairs of each of the three investment advisory panels described below, and four at-large members. One of the at-large members must be a member of a tribe. Another at-large member must be drawn from the vulnerable population of the pollution and health action areas (see the box). Non-voting members include the superintendent of public instruction, and the secretaries of the departments of health and transportation.

Clean Air and Clean Energy Account. Funds in this account would be spent on “clean air and clean energy investments,” which the initiative describes as “programs, activities, or projects that yield or facilitate verifiable reductions in pollution or assist affected workers or people with lower incomes during the transition to a clean energy economy.”

To provide advice regarding expenditures from this account, the initiative would establish the Clean Air and Clean Energy Panel. This panel would have two cochairs—one representing business, the other representing organized labor, and up to seven additional members—representing tribes, businesses, labor organizations and nontribal pollution and health action areas.

Clean Water and Healthy Forests Account. Funds from this account would be spent on “clean water and healthy forests investments,” which the initiative describes as intended to increase the resiliency of the state’s waters and forests to the impacts of climate change.

To provide advice regarding expenditures from this account, the initiative

Pollution and Health Action Areas

The initiative especially targets services to pollution and health action areas, which it defines in this way:

By July 31, 2019, the department of health shall designate pollution and health action areas. This designation must be at a minimum resolution of census tract scale and be based on the cumulative impact analysis of vulnerable populations and environmental burdens conducted by the University of Washington’s department of environmental and occupational health sciences. ...[Section 12 (2)]

“Pollution and health action areas” are those communities designated by the department of health based on the cumulative impacts analysis required by section 12(2) of this chapter and census tracts that are fully or partially on “Indian Country” as defined in 18 U.S.C. Sec. 1151. [Section 13 (26)]

“Vulnerable populations” are communities that experience high cumulative risk from environmental burdens due to:

- (a) Adverse socioeconomic factors, such as unemployment, high housing and transportation costs relative to income, and linguistic isolation; and
- (b) Sensitivity factors, such as low birth weight and higher rates of hospitalization.

would establish the Clean Water and Healthy Forests Panel. This panel would have two cochairs—one representing tribes, one representing environmental interests—and up to seven additional members—representing tribes, businesses, labor organizations and nontribal pollution and health action areas.

Healthy Communities Account. Funds from this account would be spent on “healthy community investments,” which the initiative describes as “programs, activities, or projects to prepare communities for challenges caused by climate change and to ensure that the impacts of climate change are not disproportionately borne by certain populations.”

To provide advice regarding expenditures from this account, the initiative would establish the Environmental and Economic Justice Panel. This panel would have two cochairs—one representing tribes, one representing nontribal pollution and health action areas—and seven additional members, including two representing organized labor and five representing pollution and health action areas. Of the latter five members, at least one must represent tribal areas and two must represent nontribal areas.

Additional Spending Requirements. Each year, combined spending in the three accounts would have to meet three additional requirements: (1) At least 35 percent of the total spending would have to be on programs, activities or projects that provide direct and meaningful benefits to pollution and health action areas. (2) At least 10 percent of spending would have to be on programs, activities or projects located within the boundaries of pollution and health action areas. A single investment could count against both requirement (1) and requirement (2). (3) At least 10 percent of spending would have to be used for programs, activities or projects formally supported by an Indian tribe. Such an investment could count towards requirement (1) but not against requirement (2).

Comment

What distinguishes the problem of greenhouse gas emissions is its global nature. The damages from emissions from any particular facility are not concentrated near that facility. While the state faces significant long-run costs due to global warming, there is little that the state can do by itself to avoid these costs. Successfully attacking the global warming problem requires the coordinated action of national governments.

Thus I-1631 by itself can do little to solve the problem of a warming planet. The goal of the initiative’s supporters is for Washington to set an example that other states will follow.

References

- Federal Reserve Bank of Philadelphia. 2018. [Livingston Survey](#). June.
- Kneese, Allen and Charles Schultze. 1975. *Pollution, Prices and Public Policy*. The Brookings Institution.
- Nordhaus, William. 2008. *A Question of Balance: Economic Modeling of Global Warming*. Yale Press.
- Office of Financial Management (OFM). 2018. [Fiscal Impact Statement for Initiative 1631](#).
- Sandlin, Gail. 2016. [Report to the Legislature on Washington Greenhouse Gas Emissions Inventory: 2010–2013](#). Washington State Department of Ecology Air Quality Program.
- [Text of Initiative 1631](#).
- Washington Research Council (WRC). 2016. [“Initiative 732: Imposing a New Carbon Tax in Washington State.”](#) PB 16–07. Oct. 18.