

BURIED OUT OF SIGHT

Uncovering Pennsylvania's Hidden Fossil Fuel Subsidies

THE HIGHLIGHTS



\$3.8 billion in fossil fuel subsidies in FY 2019



\$11.1 billion in external costs from unconventional gas development

UNDERSTANDING SUBSIDIES

- What? A privileged type of financial aid - it lessens a burden that was previously levied against the receiver or promotes a particular action by providing financial support
- How? Usually in the form of a tax reduction or a cash payment.
- Why? Economists in favor of subsidies often argue that subsidies are justifiable to provide the socially optimal level of goods and services which will lead to economic efficiency.

WHY TRACK FOSSIL FUEL SUBSIDIES?

Had nations reduced subsidies in a way to create efficient fossil fuel pricing in 2015, the International Monetary Fund believes that it would have lowered global carbon emissions by 28 percent and fossil fuel air pollution deaths by 46 percent, and increased government revenue by 3.8 percent of GDP.

- Tie up limited taxpayer dollars which could otherwise be used for education, infrastructure improvements, and environmental remediation
- The new Administration recently joined several international institutions (the G20, the International Energy Agency, OECD, EU, IMF) to call for the phase-out of fossil fuel subsidies

TYPES OF SUBSIDIES

Government revenue foregone

- Tax expenditure
- Under-pricing of government-owned energy resources, other natural resources, land, infrastructure, or other goods and services

Direct transfer of government funds

- Agency appropriations: Targeted spending on the sector through government budgets and budgets of individual government agencies
- Subsidies to intermediate inputs
- Wage subsidies to assist individuals in preparing for and maintaining employment (e.g. training)
- Government loans provided below-market rates, with low collateral requirements, lengthy repayment periods, or deferred repayments
- Government spending on research and development
- Government use of tax-free bonds to fund private investments

Induced transfers (price support)

- Consumption mandates
- Regulated prices set at below-market rates for consumers or above-market rates from producers
- Relief from costs enterprises normally bear in the normal course of business (labor, environmental, health, safety)
- Exemption from government procedures normally followed by enterprises

Transfer of Risk

- Credit support: Guarantees of loans, security, or credit
- Debt restructuring or cancellations
- Insurance and indemnification: market or below-market risk management or risk shifting services
- Assumption of occupational health and accident liabilities
- Assumption of liabilities for closure and post-closure risks, waste management and environmental damages

FOREGONE REVENUES

Category	Summary	Total Fossil Fuel Subsidy Estimate FY 2019 (in millions)
Government underpricing	Underpricing of government-owned resources, goods, and services.	\$530.4
Tax Credits	Provides a dollar-to-dollar reduction in tax payments for credit users.	\$14.3
Gross Receipts Tax Subsidies	Special exemptions from corporate sales tax. Decreases revenues to the PA General Fund.	\$322.9
Public Utility Realty Tax Subsidies	Special exemptions from property tax of public utilities. Decreases revenues distributed to local governments.	\$2.9
Sales and Use Tax Subsidies	Special exemptions from sales tax. Decreases revenues to the PA General Fund.	\$1,554.7
Personal Income Tax Subsidies	Special exemptions from income tax. Decreases revenues to the PA General Fund.	\$0.1
Realty Transfer Tax Subsidies	Special exemptions from a tax on real-estate transactions. Decreases revenues to the PA General Fund.	\$30.0
Local Property Tax Subsidies	Special exemption from property taxes collected by and for local governments	\$1,063.4
Motor License Fund Fuel Tax Subsidies	Special exemptions from multiple use taxes. Decreases revenue to the Motor License Fund for the construction and maintenance of highways.	\$148.5
Total		\$3,667.2

	Category	Summary	Total Fossil Fuel Subsidy Estimate FY 2019 (in millions)
Severance Tax	Government underpricing	Underpricing of government-owned resources, goods, and services.	\$530.4
PA Resource Manufacturing Tax Credit: \$65 million	Tax Credits	Provides a dollar-to-dollar reduction in tax payments for credit users.	\$14.3
Local Resource Manufacturing Tax Credit: \$26.7 million	Gross Receipts Tax Subsidies	Special exemptions from corporate sales tax. Decreases revenues to the PA General Fund.	\$322.9
Gasoline and Motor Fuels Sales Tax Exemption: \$1 billion	Public Utility Realty Tax Subsidies	Special exemptions from property tax of public utilities. Decreases revenues distributed to local governments.	\$2.9
	Sales and Use Tax Subsidies	Special exemptions from sales tax. Decreases revenues to the PA General Fund.	\$1,554.7
	Personal Income Tax Subsidies	Special exemptions from income tax. Decreases revenues to the PA General Fund.	\$0.1
	Realty Transfer Tax Subsidies	Special exemptions from a tax on real-estate transactions. Decreases revenues to the PA General Fund.	\$30.0
Oil and Gas Property Tax Exemption	Local Property Tax Subsidies	Special exemption from property taxes collected by and for local governments	\$1,063.4
	Motor License Fund Fuel Tax Subsidies	Special exemptions from multiple use taxes. Decreases revenue to the Motor License Fund for the construction and maintenance of highways.	\$148.5
	Total		\$3,667.2

DIRECT SPENDING

Category	Summary	Total Fossil Fuel Subsidy Estimate FY 2019 (in millions)
Department of Environmental Protection	Addresses legacy impacts from fossil fuel extraction, sometimes using taxpayer money to supplement fees from the fossil fuel industry; also benefits fossil fuel companies with spending related to climate change mitigation.	\$51.0
Public Utilities Commission	Oversees PA's Alternative Energy Portfolio Standard to reduce greenhouse gas emissions, yet includes some fossil fuels in its electricity sourcing requirements	\$2.6
Department of Community and Economic Development	Marketing to attract fossil fuel companies and supports their activities with grants, loans, and loan guarantees for site acquisition, preparation, and remediation, job creation and workforce development, and business development	\$25.4
Department of Transportation	Responsible for programs and policies impacting transportation, PennDOT has a rail freight grant program and a CNG fueling station public-private partnership which directly support shale gas	\$39.9
Department of General Services	In its role to support the operations of all state agencies, DGS implements a 1990 act that requires use of PA coal in any heating systems or units installed in state buildings	Unknown
Total		\$118.9

	Category	Summary	Total Fossil Fuel Subsidy Estimate FY 2019 (in millions)
Environmental Remediation	Department of Environmental Protection	Addresses legacy impacts from fossil fuel extraction, sometimes using taxpayer money to supplement fees from the fossil fuel industry; also benefits fossil fuel companies with spending related to climate change mitigation.	\$51.0
Alternative Fuels Incentive Act: \$4.3 million	Public Utilities Commission	Oversees PA's Alternative Energy Portfolio Standard to reduce greenhouse gas emissions, yet includes some fossil fuels in its electricity sourcing requirements	\$2.6
Tier II of the Alternative Energy Portfolio Standard	Department of Community and Economic Development	Marketing to attract fossil fuel companies and supports their activities with grants, loans, and loan guarantees for site acquisition, preparation, and remediation, job creation and workforce development, and business development	\$25.4
Mostly Estimates due to lack of transparency	Department of Transportation	Responsible for programs and policies impacting transportation, PennDOT has a rail freight grant program and a CNG fueling station public-private partnership which directly support shale gas	\$39.9
Rail Freight Assistance Grant Programs	Department of General Services	In its role to support the operations of all state agencies, DGS implements a 1990 act that requires use of PA coal in any heating systems or units installed in state buildings	Unknown
CNG Fueling Stations Public-Private Partnership	Total		\$118.9

FOREGONE
REVENUES

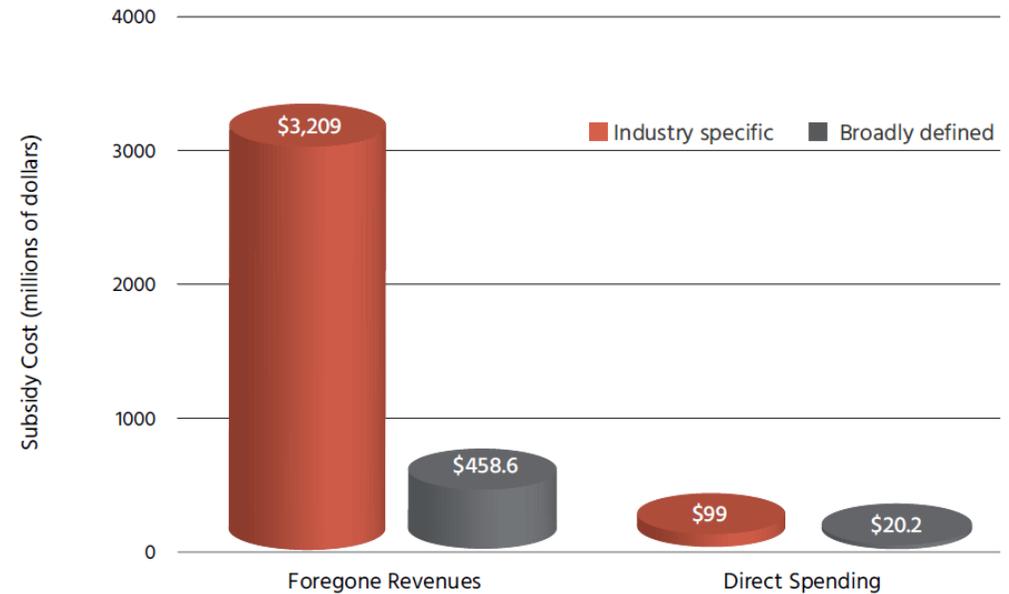
DIRECT
+ SPENDING

= \$3.8 BILLION

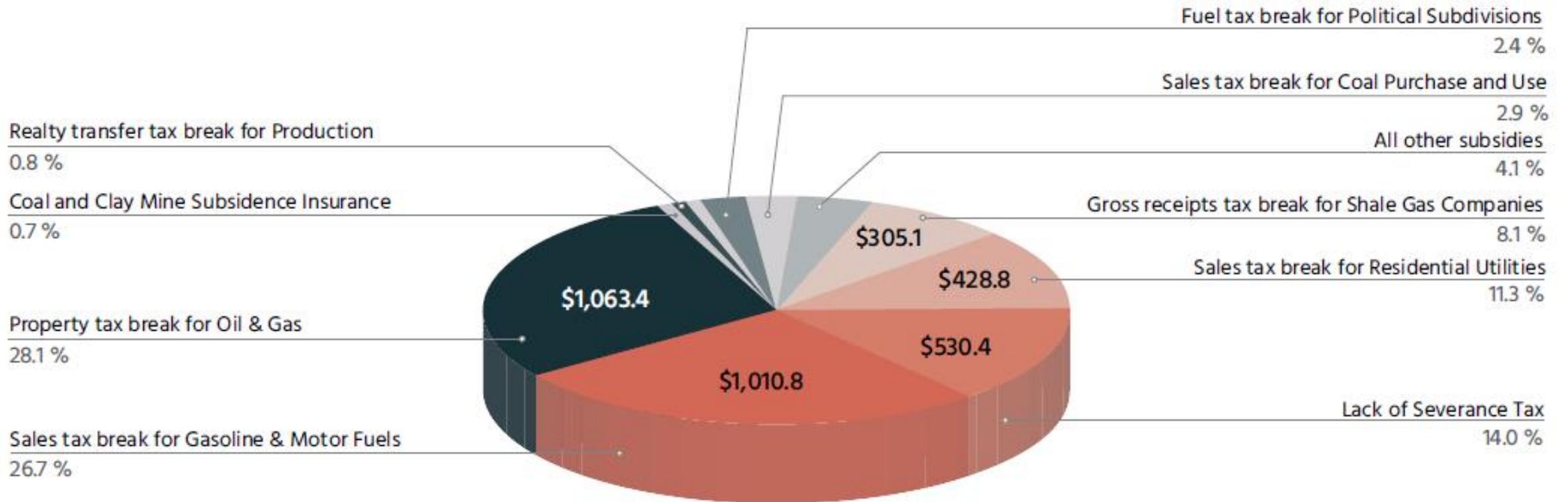
TOTAL
FY 2019
FOSSIL
FUEL
SUBSIDY

ANALYSIS

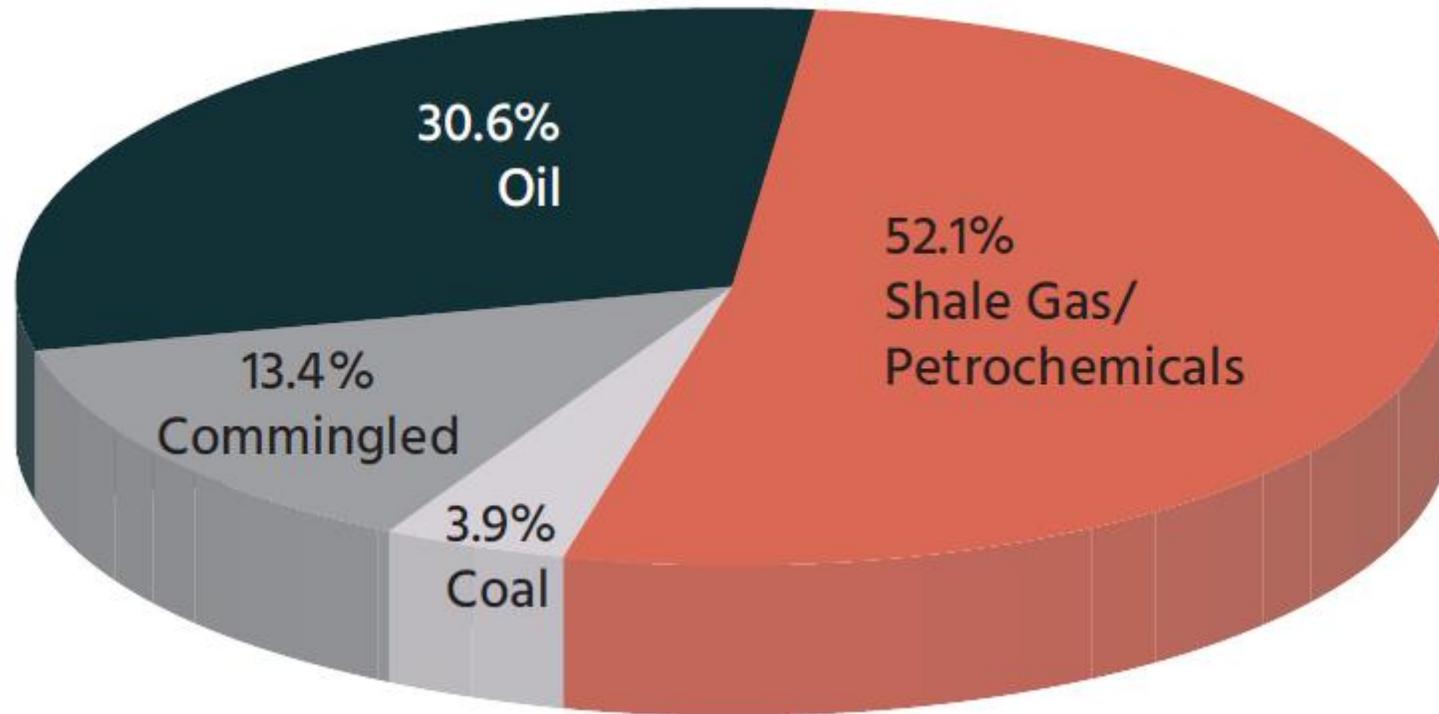
- Over 50 subsidies identified
- \$296 average per resident cost
- Nearly 97% industry specific
- 14% increase from 2015 analysis; increases budgeted to continue



ANALYSIS: THE TEN LARGEST SUBSIDIES COMPRISED 96% OF THE SUBSIDY TOTAL.



ANALYSIS: THE SHALE GAS & PETROCHEMICAL INDUSTRY BENEFITTED FROM \$2 BILLION WORTH OF SUBSIDIES IN FY 2019.



NEGATIVE EXTERNALITIES

- What? Negative externalities occur when the producer of a good or service creates costs that it does not bear the burden of paying.
- How? The most common example of a negative externality is pollution
- But is it a subsidy? Depends.

NEGATIVE EXTERNALITIES FROM SHALE GAS DEVELOPMENT

Negative Externalities: Unconventional Gas	Estimated Cost FY 2019 (in millions)	Summary
Hydraulic Fracturing	\$146.3	
Degradation of the Natural Environment	\$7.3	Intensive use and degradation of land and water
Water Consumption	Unknown	Permanent loss of natural resource averaging about 12 million gallons per fracked well
Infrastructure Damage	\$4.2	Damage to road and bridges, as well as increased air pollution, car accidents, dust, and noise
Creation of Boomtowns	Unknown	Negative community impacts including temporary influx of transient workers, increases in crime, and increases in housing instability, among others
Groundwater Degradation	\$22.0	Damage to groundwater results in water availability issues and treatment costs, adverse health impacts, and reduced property value. Estimate includes avoidance behaviors only.
Air Pollution	Unknown	Air pollution emissions from compressor stations, well pads, and pigging stations
Pipeline Leaks & Ruptures	Unknown	Incidents occur on average every 19 days in Pennsylvania, posing risks of fatality, injury, property damage, and ecosystem impacts.
Improper Disposal of Fracking Waste	Unknown	Improper treatment of radioactive and hazardous waste, exemption from full disclosure of chemicals, and leaks and spills
Insufficient Bonding Requirements	Unknown	Transfer of remediation liabilities and elevated risk of bond forfeiture
Impacts on Health	\$112.8	Total health impacts associated with hydraulic fracturing (including from groundwater contamination, air pollution, and improper disposal listed above) relating to low birth weights, asthma & respiratory afflictions, sleep disruption, and depression
Processing and Downstream Use	\$0.0	
Impacts of Petrochemical Manufacturing	Unknown	Air pollution, health, and safety risks which disproportionately burden people of color and people living in poverty, as well as other externalities that are felt within and beyond Pennsylvania, including greenhouse gas emissions, plastic collection and sorting costs, and ocean cleanup.
Climate Impacts	\$10,938.0	
Greenhouse Gas Emissions	\$10,938.0	Disrupts climate stability
Grand Total	\$11,084.5	

RECOMMENDATION #1: END ECONOMIC RELIANCE ON FOSSIL FUELS

- Discontinue petrochemical tax credits: Based off recent job estimates, the PRM Tax Credit will cost taxpayers approximately \$57,000 per job per year while the Local Manufacturing Tax Credit will cost \$27,000.
- Transform DCED's approach to community and economic development
 - Institute new climate conscious leadership
 - Break down silos and establish cross-departmental strategic alignment with agencies including DEP & DOH
 - Immediately phase out programs and activities specific to the fossil fuel industry
 - Establish funding directives to limit and eventually eliminate grants, loans, and loan guarantees supporting PA's fossil fuel industry
 - Create a DCED Climate Plan focused on divestment and transition

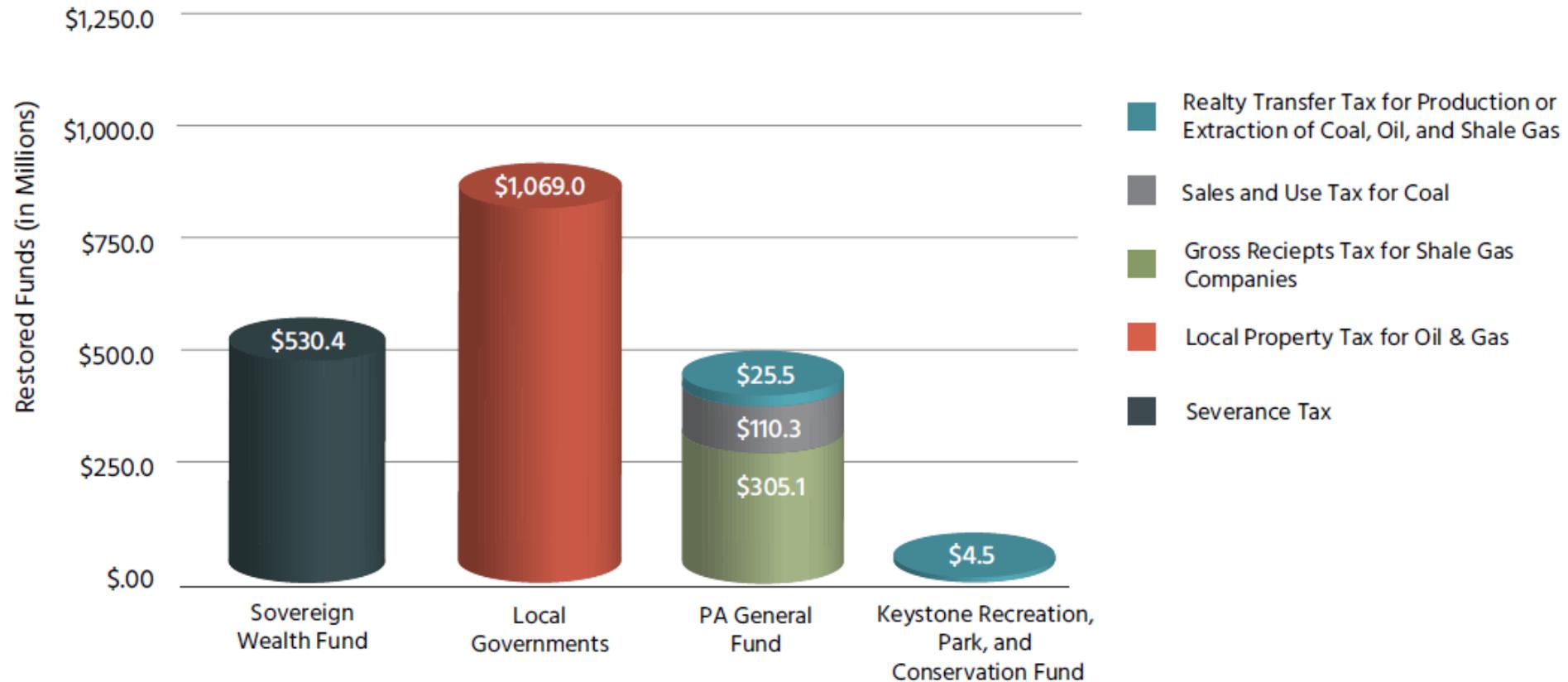
RECOMMENDATION #2: SHIFT THE PUBLIC HEALTH BURDEN OF SHALE GAS DEVELOPMENT TO THE INDUSTRY

- Expand the buffer between residents and hydraulic fracturing.
- Reduce environmental risk.
 - Enact common-sense protections from the 2020 Attorney General's Report.
 - Close the hazardous waste loophole.
 - Develop a sustainable mechanism for capping wells and increase the cost and duration of bonding requirements.
 - Protect overburdened communities
- Pass common-sense protections for surface owners.
- Uphold existing protections.

RECOMMENDATION #3: REDUCE SUBSIDIES FOR GREENHOUSE GAS EMISSIONS

- Remove fossil fuels from among the desired outcomes of all clean or alternative energy programs.
 - Eliminate the Natural Gas Vehicle Development Program.
 - Disqualify fossil fuel and fossil fuel-related infrastructure from receiving assistance under the Alternative Fuels Incentive Act and repurpose funds to expand the EV rebate program, targeting car-dependent rural areas and low- and moderate-income Pennsylvanians with older, more polluting vehicles.
- Eliminate Tier II of the Alternative Energy Portfolio Standard (AEPS) and strengthen renewable energy goals.
- Join the Regional Greenhouse Gas Initiative (RGGI).

RECOMMENDATION #4: RESTORE \$2.0 BILLION IN FOREGONE REVENUES



RECOMMENDATION #5: TRACK AND REDUCE FOSSIL FUEL SUBSIDIES

- **Industry specific:**
 - gross receipts tax subsidy for shale gas distribution companies
 - sales and use tax subsidy for tangible personal property or services in mining operations
 - realty transfer tax subsidy for production or extraction of coal, oil, shale gas, or minerals
 - local property tax exemption for oil and gas
- **Many broadly defined subsidies did not disclose the necessary details to accurately ascertain fossil fuel subsidy values**
- **Direct Spending: Sources of funding for individual programs was often obscured**
- **Recommendation:**
 - Annual reports on the purpose, progress, cost, and success of DCED's tax credit, grant, and loan programs.
 - Governor's Budget Office should track fossil fuel subsidies and set targets for their removal.

Questions?
