A FORMULA
UNDER THEAMERICA FIRST, COMPREHENSIVE, WORLDWIDE, FOSSIL FUEL TAX ACT (AFCWFFT)[1]
FOR COLLECTINGALL REVENUE IN THE
***[NAME OF PRESIDENT]* COAL MINER LEGACY TRUST FUND**
AND FOR PAYING IT ALL AS CARBON DIVIDENDS THEREFROM

November 25, 2019

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[1]By Claude David Convisser, Chief Executive Officer, Plant Oil Powered (POP) Diesel, Inc. and Managing Director, POP Diesel Africa Limited (Ghana). POP Diesel does not take any position on how to allocate revenues from a fossil fuel tax. This Formula is only an example to show how it can be done equitably via carbon dividend payments and in a way to gradually end fossil fuel consumption while mitigating pain imposed on residents of high coal-consuming states.

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I. $150 BILLION PER YEAR REVENUE ESTIMATE

The revenue estimate from AFCWFFT is $150 billion per year, derived as follows. A Congressional Budget Office (CBO) study of a fossil fuel tax of $25 per metric ton on carbon dioxide estimated that annual revenue would be $125 billion to $150 billion. AFCWFFT starts with a 44 percent higher tax rate of $36 per MT but phases in the tax on coal over 15 years; in the first year, the tax rate on coal is 3.3 percent of the tax rate imposed on other fossil fuel sources.

A. First-Year Revenue Estimate

Here is the U.S. contribution of carbon dioxide as between major fossil fuels:

Table 1

Fossil Fuel	Percent of CO2 Emissions
Petroleum	45
Natural gas	29
Coal	26
Total:	100

Therefore, from an AFCWFFT starting tax rate that is 44 percent higher than rate used in the CBO model ($36/MT versus $25/MT) but a tax rate on coal, which contributes 26 percent of carbon dioxide pollution coming from fossil fuels, of near zero in the first year (and assuming that the CBO model did not phase-in the tax rate on coal, as AFCWFFT does), CBO's high-end estimate of $150 billion in revenue for the first year coming from AFCWFFT seems appropriate to use.

B. Revenue Estimates for Subsequent Years

With a purpose of reducing fossil fuel consumption to the point of zero by 2050, both the AFCWFFT tax rate increases every year and the rate of the tax's imposition on coal increases every year, the latter from 3.3 percent of the AFCWFFT tax rate in the first year, 2021, to 100 percent in the fifteenth year, 2035 (see the schedules printed on pages 15 and 17 of the Explanatory Memo,http://popdiesel.com/pdf/ExplanationOfAFCWFFT.pdf.

However, it is impossible to estimate the revenue going from the first year into the future with much beyond guesswork. This formula and revenue allocation discussed below assumes $150 billion per year indefinitely. However, presumably by the year 2050, when the AFCWFFT tax rate reaches more than $10,000 per metric ton of carbon dioxide, fossil fuel consumption will have reached zero and therefore, AFCWFFT tax revenue will be zero by that time.

C. Irrelevance of Future Revenue Scale in Light of Budget Neutrality of AFCWFFT

Since, as set forth below, AFCWFFT is meant to be revenue-neutral, with all revenue being re-distributed to alleviate the Tax's burden on those vulnerable Americans most likely to suffer from its imposition, a precise understanding of its revenue dimensions in the first and succeeding years is unnecessary for constructing a formula for revenue allocation and Carbon Dividend distribution. No matter the scale of revenue collected, all revenue collected will be disbursed within the same year in the form of Carbon Dividends allocated to five groups of vulnerable Americans who qualify under one or more of the federal social programs listed below.

The five beneficiary categories for disbursement of Carbon Dividends and the means of delivering this tax revenue to each one are:

1. Coal miners (each one with five years' experience receives $100,000 tax-free)
2. Poor children (raising SNAP benefits)
3. The unemployed (raising FUTA benefits)
4. Retirees and the disabled (raising Social Security benefits)
5. Employees and the self-employed (lowering payroll taxes and giving a credit to the self-employed)

Alternative measures for revenue distribution not employed in AFCWFFT could be by household, by adult American, by taxpayer, or by other means.

II. CREATION OF THE [*NAME OF PRESIDENT*] COAL MINER LEGACY TRUST FUNDAND DEPOSIT OF ALL AFCWFFT REVENUES INTO IT FOR DISBURSEMENT TO COAL MINER BENEFICIARIES AND OTHER FEDERAL SOCIAL PROGRAMS

The [*Name of President*] Coal Miner Legacy Trust Fund will be created as a separate line entry in the federal budget to hold and disburse all revenue collected under AFCWFFT. Administration of this Fund shall be by the Executive Office of the President or the President's delegate, as set forth in the statute. Disbursements will be made to other federal social programs and Carbon Dividend beneficiaries by Executive Order not conflicting with the statutory framework set forth below.

A. All Carbon Dividend Beneficiaries Receive Payment from the [*Name of President*] Coal Miner Legacy Trust Fund

All Carbon Dividend beneficiaries will receive a check from the [*Name of President*] Coal Miner Legacy Trust Fund or a line entry on their federal payroll tax stub indicating that this Fund paid part of their tax for them.

B. Implementation by Executive Order: Advantages

The mechanism of mandating an Executive Order to disburse funds to statutorily-identified, pre-existing federal social programs and benefits offers four advantages for easing the AFCWFFT bill's passage.

First, it avoids the need to refer the AFCWFFT bill to multiple legislative Committees with oversight of the other federal social programs.

Second, since the Carbon Dividend benefit will supplement the amount of a pre-existing benefit that the Carbon Dividend recipient will already be entitled to receive under federal and state law governing those social programs, or in the case of the federal payroll tax, the Carbon Dividend will alleviate the amount of the tax the employee has to pay, there will not be any need to change any of the federal statutes and regulations governing those social programs.

Third, in the same way that the monthly bill for a non-cellular, land telephone line has multiple entries for various state and federal taxes on it, AFCWFFT requires that a benefit statement for all of the above federal social programs, whether the funds are disbursed by the federal or a state government, include a line item stating the amount of the Carbon Dividend benefit that is being paid by the [*Name of President*] Coal Miner Legacy Trust Fund according to the formula set forth in this Memorandum. Although the beneficiaries under the qualifying federal social programs will continue to receive only a single benefit check, the line item must identify the portion of the benefit check that constitutes a Carbon Dividend payment or tax alleviation coming from the [*Name of President*] Coal Miner Legacy Trust Fund. In the case of federal payroll tax, the employee's paycheck stub will state the amount of tax that would be payable under the statutory calculation of Social Security and Medicare law, and then have a separate line entry stating a credit being paid by the [*Name of President*] Coal Miner Legacy Trust Fund, leaving a net tax paid by the employee and deducted from his or her paycheck that is lower due to this AFCWFFT contribution.

The foregoing method of reporting on a social program or employee check stub to every American qualifying for a Carbon Dividend the amount of Dividend being paid to or for the American will regularly remind Americans who are Carbon Dividend beneficiaries of the President's role in establishing the [*Name of President*] Coal Miner Legacy Trust Fund and putting additional money into their pockets.

Fourth, the means of executing the revenue collection and disbursement of Carbon Dividends by statutorily-mandated Executive Order gives the President an active and central role in implementing the carrot part of AFCWFFT. It gives him multiple opportunities, and a perpetual line item on federal entitlement and all paycheck stubs, for claiming credit for the part of the bill that will most appeal to people, a supplement to their pocket book and wallet.

C. Payment of the First Carbon Dividends <u>Precedesthe Start of Tax Collection</u>

The [*Name of President*] Coal Miner Legacy Trust Fund shall be authorized to borrow money in advance to pay for the first two months' worth of Carbon Dividends. It shall repay the first month's loan amounts from revenue collected in the third month. It shall dedicate all subsequent months' revenue to paying off any loan borrowed two or one month earlier.

The obligation to pay the AFCWFFT tax and tax collection shall start two months after the first Carbon Dividends are paid. This delay will lessen any shock to Americans' wallets by filling them with two months' worth of transitional, advance payment of Carbon Dividends.

III. <u>Carbon Dividend Beneficiary Categories</u>

A. <u>Detail</u>

Revenue allocation of Carbon Dividends coming from the [*Name of President*] Coal Miner Legacy Trust Fund falls between the following beneficiary programs and will benefit the categories and numbers of people stated below:

<u>Coal Miners</u>. There were a total of 53,051 coal miners across the U.S. in 2017, as defined by the U.S. Energy Information Administration. Five billion dollars ($5 billion) of the revenue collected in the first year will be reserved within the [*Name of President*] Coal Miner Legacy Trust Fund to make to each coal miner an eventual [*Name of President*] Coal Miner Benefit payment of $100,000. It is proposed that, by Executive Order mandated by the AFCWFFT statute, this benefit payment to coal miners be made free of federal income tax, notwithstanding any federal tax payable on any other portion of the Coal Miner's income.

<u>Poor Children</u>. Supplemental Nutrition Assistance Program (SNAP, or food stamps). Twenty million households and 40 million persons benefit from this program at any one time. It disburses $60 billion per year in an average amount of $256 per household per month, or $3,072 per enrolled household per year.

<u>The Unemployed</u>. Federal unemployment benefits have reached 6 million people per year in recent years, each for an average of 4 months collecting $361.40 per week, paying on average a total of $6.263.06 per beneficiary enrolled throughout the year. This program has disbursed an average of $100 billion per year over the last 5 years.

<u>Retirees and the Disabled</u>. Social Security reaches 62 million beneficiaries. The average monthly benefit for a retiree in 2019 is $1,461, or $17,532 per year, totaling $1.086 trillion per year.

Employed Wage-Earners and the Self-Employed. 162 million Americans pay Social Security and Medicare federal payroll and self-employment taxes. An employee pays a Social Security tax rate of 6.2 % and a Medicare tax rate of 1.45 % on the first $132,900 of wages. Self-employment tax is double those rates. The median wage for an American worker in the first quarter of 2019 was $47,060. Such a worker would pay around $3,600 per year in federal payroll tax. There are 129.3 million households in America. 80.8 % of families in the U.S., or 104.5 million households, have at least one employed family member. Since average household size is 2.53 people, lowering the federal payroll tax will touch 264.4 million Americans.

There are additional federal programs comprising the social safety net, such as Temporary Assistance to Needy Families ("TANF") and Section 8 Housing Vouchers. AFCWFFT does not utilize these programs for disbursing Carbon Dividends. TANF only benefits 2.4 million families per year, around one-quarter of the number served by SNAP, whose beneficiaries fall into the same, neediest category. Section 8 benefits families according to the localized housing market; Voucher holders likely will qualify for Carbon Dividends under one of the other programs selected in this Memorandum.

B. Coal Miner Eligibility for the [*Name of President*] Coal Miner Benefit

Any Coal Miner meeting the following criteria is eligible to claim and entitled to receive the [*Name of President*] Coal Miner Benefit of $100,000 tax-free:

1. As of the date of the first introduction of AFCWFFT in either chamber of Congress, the person was employed full-time as a Coal Miner.

2. The person can prove that he or she worked full-time as a Coal Miner for at least five years before claiming payment of the [*Name of President*] Coal Miner Benefit, including having completed a total of at least one year's full-time employment as a Coal Miner before the date of the first introduction of AFCWFFT in either chamber of Congress.

3. As of the date of filing a claim for the [*Name of President*] Coal Miner Benefit, the person may never more work in a coal mine.

4. The President shall by Executive Order state such additional criteria not conflicting with the foregoingby which a Coal Miner can claim the benefit.

IV. REVENUE / CARBON DIVIDEND DISTRIBUTION

A. To Every American, With Focus on Those Falling Within the Social Safety Net

Taking $150 billion of tax collected in revenue and dividing by the number of Americans as of 2018, or 327.2 million, yields an average tax burden of $458.44 per person per year. This figure is the touchstone for Carbon Dividend revenue distribution to federal social programs under AFCWFFT. AFCWFFT skews towards paying Carbon Dividends and returning revenue to persons falling within the social safety net, which means that most Americans, those whose incomes are above the social safety net, will see less of a return in revenue than the average amount of $458.44 per American.

B. Disbursement of $150 Billion as between Carbon Dividend Beneficiary Categories

The following is proposed for allocating $150 billion in AFCWFFT revenue as between Carbon Dividend beneficiary categories, on average nationwide. After the first year, there should not be any need to take any more tax revenue for coal miners, beyond this $5 billion, off the top of the AFCWFFT revenue collected and reserved for them. In every year following the first year, all AFCWFFT revenues collected in the [*Name of President*] Coal Miner Legacy Trust Fund will be distributed via the four federal programs listed in Table 3 below (counting a reduction in the federal payroll tax as one of these four federal programs), as adjusted by footnotes 1 and 2. Note that the distribution to coal miners is described above.

Table 2

Allocation of Revenues

Category	# of Direct Beneficiaries/Year	First year ($ billions)	Every Year After First Year ($ billions)	Nationwide Average in $ per Direct Beneficiary
Coal miners	53,051	5	0	**$100,000.00** (one time, tax free)
Poor children/SNAP	20 million, with 20 mill. dependents	18.3376	same	**$916.88** per year (2 X $458.44)
The unemployed/FUTA	6 million	1.8319	same	**$458.44** per year
Retirees and disabled/SSI	62 million	28.4233	same	**$458.44** per year
Employed wage-earners and the self-employed	162 million, touching 264.4 million Americans	95.4903	100.4903[2]	**$589.44**[3] per yr. (1.2857 X $458.44)

[2]$5 billion added as money that was dedicated in the first year for [Name of President] Coal Miner Benefit payments totaling $100,000 for each qualifying coal miner.

[3]Increases to $625.97 per person, or 1.37 X $458.44, in year 2 and every year thereafter, taking into account the $5 billion that is added in total to this category, which was taken from $5 billion reserved in the first year for eventual payment of $100,000 as the [Name of President] Coal Miner Benefit to each of 50,000 Coal Miners.

The above Carbon Dividend benefit amounts are nationwide averages, based on revenue of $150 billion per year and a nationwide population of 327.2 million people. The benefit amounts will have to be adjusted based on yearly changes in revenue and total American population.

C. With An Adjustment for Coal Consumption Favoring Residents of Those States That Rely on Coal-Fired Electricity That Phases-in Over 15 Years

Once a dollar amount is attributed to and calculated for a person who falls under one of the four Carbon Dividend beneficiary categories (setting aside the special benefit for Coal Miners), an adjustment in the amount of the disbursement is made according to the state that the person resides in. State disbursement adjustments are made to give a proportionately bigger payment to residents of states consuming more than the average amount of coal *per capita* than Americans who live in states consuming less coal *per capita*. The purpose of this adjustment is to return proportionately more of the tax revenue and pay more Carbon Dividends to those consumers who will pay proportionately more of the tax due to their residing in states and having to use electricity that is more reliant on coal combustion than the nationwide average.

This disbursement adjustment in Carbon Dividends for coal consumption phases in, reaching 100 percent implementation by the fifteenth year, phasing in at the same rate as the AFCWFFT tax is applied to coal:

Table 3

Year	Percentage of AFCWFFT tax rate applied to coal	Phase-in of coal disbursement adjustment according to phase-in of AFCWFFT tax rate applying to coal
2021	3.33	3.33
2022	6.67	6.67
2023	10.00	10.00
2024	13.33	13.33
2025	16.67	16.67
2026	20.00	20.00
2027	23.33	23.33
2028	26.67	26.67
2029	30.00	30.00
2030	33.33	33.33
2031	36.67	36.67
2032	44.00	44.00
2033	55.00	55.00
2034	75.00	75.00
2035	100.00	100.00
forever after	100.00	100.00

D. Calculating the Coal Dependence Adjustment <u>According to Each State's Relative Coal Consumption</u>

The above nationwide average Carbon Dividends disbursed through the above four federal social programs (counting alleviation of the federal payroll tax as a social program) is then adjusted for each state and Carbon Dividend recipient in the state according to the following formula. Twenty-six (26) percent of the Carbon Dividend payment, representing the percentage that coal contributes nationwide to total U.S. carbon dioxide emissions, is subject to this adjustment, leaving 74 percent to be disbursed through each federal social program without any adjustment for coal consumption in the Carbon Dividend beneficiary's home state. On an individual basis, 26 percent of the average nationwide Carbon Dividend of $458.44 is $119.19. This $119.19 average is the portion that will fluctuate from state to state, depending on the coal dependency of the state of residence of the particular Carbon Dividend beneficiary.

There are four steps in the formula for adjusting the average Carbon Dividend payment rate according to the beneficiary's state of residence and that state's relative, *per capita* coal consumption.

Step 1:<u>Calculate the State's *Per Capita* Coal Consumption</u>

<u>First</u>, each state's *per capita* coal consumption is calculated. Based on 2017 data supplied by the U.S. Energy Information Administration, the range of results runs from a high of 39.47 kilograms of coal consumed per person per year in Wyoming to zero, which 11 states and U.S. territories have achieved, as stated in the table printed as The Appendix. The nationwide average is 1.76 kg coal/person/year. Carbon Dividend recipientsresiding in the 11 states that have zero consumption of coal will receive no share of the revenue coming from the 26 percent of carbon dioxide pollution nationwide generated by coal from among fossil fuel sources. In other words, they will each receive on average 74 percent of the nationwide average Carbon Dividend per beneficiary for each of the five programs listed in the chart above.

There are twenty three states with *per capita* coal consumption above 1.76 kg/person/year listed in the upper half of the table printed inThe Appendix, which have between them 40.5 percent of national U.S. population, beginning with Ohio at 1.98 kg coal/person/year. Carbon Dividend recipients in these states will receive an adjustment upwards from the nationwide average per beneficiary they would otherwise receive from the formula presented in the preceding section, to aid them in coping with a higher burden of the AFCWFFT tax due to their state's higher-than-average reliance on coal-fired electricity. Carbon dividend recipients in the 27 states and additional territories with 59.5 percent of the national U.S. population consuming less than the national average *per capita* of coal, appearing in the bottom half of the table that is The Appendix, will receive a proportionately lower share of the revenue disbursement. As stated above, beneficiaries residing in states that are no longer reliant on coal will receive none of the share of revenues, 26 percent nationwide, coming in from the tax as applied to coal.

Step 2: Determine Each State's Coal Consumption Factor <u>in Relation to the National Average</u>

<u>Second</u>, the adjustment is applied to the 26 percent of a recipient's Carbon Dividend that accounts for the nationwide share of carbon dioxide emissions that coal combustion is responsible for. To calculate this adjustment, each state's per capita coal consumption is divided by the nationwide average of 1.76 kg/person/year to arrive at its magnitude in relation to an average of one (1.00). This result is called the state's "coal consumption factor."

For example, beneficiary residents of Wyoming receive the maximum adjustment to this 26 percent share of the average nationwide Carbon Dividend because they have the highest per capita coal consumption and therefore, the highest coal consumption factor in the United States. At 39.47 kg/person/year, Wyoming's *per capita* coal consumption is 22.43 times the nationwide average of 1.76 kg coal/person/year. Wyoming's coal consumption factor is, thus, 22.43. For Wyoming, the average, nationwide beneficiary amount deriving from the 26 percent of the average Carbon Dividend benefit for which coal is responsible, or $119.19, is multiplied by Wyoming's coal consumption factor of 22.43, to arrive at a gross adjusted figure of $2,673.43 as a gross, average Wyoming Carbon Dividend benefit deriving from coal.

Step 3: Phase-in and Phase-out the Benefit <u>According to the Phase-in Rate That AFCWFFT Applies to Coal</u>

<u>Finally</u>, this gross adjusted figure is multiplied by anationwide annual phase-in adjustment factor, which corresponds to the percentage of the AFCWFFT tax rate that is applied annually to coal. This coal phase-in is depicted in Table 2 above. In the first year of 2021, the nationwide annual phase-in adjustment factor for AFCWFFT as it applies to coal is 3.33 percent.

a. States with Higher-Than-Average Coal Consumption Phase-in the <u>Adjustment for Coal Consumption</u>

Therefore, in the case of Wyoming, which has the highest *per capital* coal consumption in the nation, the average Carbon Dividend beneficiary will receive 3.33 percent of Wyoming's gross coal adjustment of $2,673.43 as an adjustment amount, or $89.02, in addition to the base average nationwide beneficiary amount of $119.19 deriving from the 26 percent of nationwide carbon dioxide emissions deriving from coal, making a total adjustment for coal consumption for the average Wyoming Carbon Dividend beneficiary of $119.19 plus $89.02, or a total of $208.21. In the second year of 2022, the nationwide annual phase-in adjustment factor for the AFCWFFT tax rate as it applies to coal increases to 6.67 percent. Therefore, the average Wyoming beneficiary will receive 6.67 percent of $2,673.43, or $179.12, plus the base average nationwide beneficiary amount of $119.19 attributed to coal, making a total of $298.31.

b. States with Lower-Than-Average Coal Consumption <u>Phase-out the Adjustment for Coal Consumption</u>

Likewise, in the case of a state with a *per capita* coal consumption factor of less than 1.00 but greater than zero, such as North Carolina at 0.63, the state's gross coal adjustment is derived from multiplying the state's coal consumption factor (0.63, in the case of North Carolina) by the average, nationwide beneficiary amount deriving from the 26 percent of the average Carbon Dividend benefit for which coal is responsible, \$119.19. However, in a state with a per capita coal consumption factor of less than 1.00, signifying that its *per capita* coal consumption has reached less than the national average, this adjustment for coal consumption is subtracted from, rather than added to, the base, average, nationwide, beneficiary amount of \$119.19 attributed to coal.

For example, in the case of North Carolina, the gross, average North Carolina Carbon Dividend benefit deriving from coal is (0.63)(\$119.19) = \$75.09. This number is reduced by the annual rate by which the AFCWFFT tax rate is imposed on coal consumption, or 3.33 percent in the first year, making a net average payment to a North Carolina Carbon Dividend recipient of [\$75.09 - (0.033)X(\$75.09)] = \$72.61. As the percentage of the AFCWFFT tax rate imposed on coal increases annually, the share of the net average Carbon Dividend benefit deriving from coal in those states like North Carolina that consume less coal than the nationwide average will diminish.

For instance, in the second year of AFCWFFT, 2022, when the rate of AFCWFFT tax imposed on coal increases to 6.67 percent, the portion of the average North Carolina Carbon Dividend attributable to coal consumption per beneficiary will decrease by 6.67 percent. The product of (0.067) multiplied by (\$75.09) will be deducted from North Carolina's gross average Carbon Dividend benefit of \$75.09, yielding an average Carbon Dividend paid in North Carolina attributable to coal during the second year of AFCWFFT of \$70.06. This figure is lower than the \$72.61 paid on average in the first year by the margin of the increase in tax rate's imposition on coal consumption.

By the foregoing mechanism, the adjustment in Carbon Dividends favoring states that consume coal will gradually wind down, even in those states that consume less coal than the nationwide average.

c. Getting the Incentives Right to Gradually End Coal Consumption While Minimizing Disruption

In this way, residents of states that consume more coal *per capita* will face an increasingly stiff tax burden as both the AFCWFFT tax rate increases and the rate at which this tax is imposed on coal consumption increases. Their Carbon Dividend beneficiaries will realize annually an increasing benefit payment for energy that continues to derive from coal, although as the years advance, this increase will notkeep up with the magnitude of the annual increase in AFCWFFT tax imposed on coal. Carbon Dividend beneficiaries in states that consume less coal *per capita* will see over time the removal from their benefit of an increasing portion of the share of their Dividends attributed to their state's remaining coal consumption, the removed portion increasing at the rate that the AFCWFFT tax becomes applied to coal.

The foregoing incentives are intended to drive both groups of states' coal consumption to zero in a gradual and fair way, while alleviating some of the pain for residents of those states that consume more than the average *per capita* of coal. At the point that states reach zero coal consumption, their resident Carbon Dividend beneficiaries will not receive any share of the nationwide average AFCWFFT benefit due to coal consumption. Yet these residents also will not face any of the increasingly heavy tax burden that AFCWFFT imposes over a fifteen-year period, and that remains fully in place thereafter, on residents of other states for their continued consumption of coal.

Lastly, it should be noted that the foregoing method balances mathematically in aggregate the coal consumption adjustment additions made for beneficiaries residing in states that consume higher than the average nationwide *per capita* consumption of coal and the reductions made from those beneficiaries residing in states with *per capita* coal consumption that is lower than the nationwide average. Since the adjustments turn on the relation of a state's coal consumption in relation to the *per capita* nationwide average, the foregoing method will not spend any more or less money in aggregate than if the average benefit were determined nationwide regardless of each state's *per capita* coal consumption.

Step 4: Perform Calculation Separately for Each Statefor Each Category of Federal Program Benefit Receiving Carbon Dividends

The foregoing calculation must be performed separately for each state for each of the four beneficiary categories of poor children (SNAP), the unemployed (FUTA), retirees and the disabled (Social Security), and employed wage-earners (federal payroll tax).

E. Update Formula as National and States' Coal Consumption Evolve

Since the above calculations turn on the share of greenhouse gas emissions generated by coal combustion as between fossil fuels (currently 26 percent) and the degree to which a state is consuming more or less than the nationwide *per capita* average amount of coal, these numbers will evolve over time. Therefore, this formula should be adjusted every year or two, according to whenever U.S. EIA updates its latest nation- and statewide data on coal consumption. This update should include the nationwide share of carbon dioxide combustion emissions attributable to coal, which presently stands at 26 percent.

In addition, as stated above, the baseline nationwide formulas for Carbon Dividends by each of the four federal social programs (counting federal payroll tax reduction as a social program) will have to be updated yearly, in any event, depending on AFCWFFT revenue collected in the [*Name of President*] Coal Miner Legacy Trust Fund and on state population figures.

V. CONCLUSION

Please do not hesitate to contact the author with any questions.

APPENDIX

Coal Consumption and Coal Adjustment Factor by State

(2017 data, U.S. Energy Information Administration and Census Bureau)

State	coal consumed, short tons	% of U.S. coal consumption	population % of the U.S.	state population (millions)	*per capita* coal consumption per state's pop. (kg coal/person)	*per capita* coal consumption factor, where 1 = nat'l average
Wyoming	24,151	3.81	0.17	0.56	39.47	22.43
North Dakota	22,423	3.54	0.23	0.75	27.09	15.39
West Virginia	25,571	4.04	0.55	1.80	12.92	7.34
Montana	8,695	1.37	0.32	1.05	7.55	4.29
Nebraska	14,307	2.26	0.58	1.90	6.85	3.89
Kentucky	28,368	4.48	1.35	4.42	5.84	3.32
Missouri	37,042	5.85	1.85	6.05	5.56	3.16
Indiana	39,089	6.17	2.02	6.61	5.38	3.05
Arkansas	17,452	2.76	0.91	2.98	5.33	3.03
Iowa	15,675	2.48	0.95	3.11	4.58	2.60
Kansas	13,186	2.08	0.88	2.88	4.16	2.37
Utah	12,332	1.95	0.96	3.14	3.57	2.03
New Mexico	7,262	1.15	0.63	2.06	3.20	1.82
Wisconsin	19,480	3.08	1.76	5.76	3.08	1.75
Alabama	16,243	2.57	1.48	4.84	3.05	1.73
Illinois	35,493	5.61	3.85	12.60	2.56	1.46
Colorado	15,266	2.41	1.72	5.63	2.47	1.40
Texas	75,689	11.96	8.68	28.40	2.42	1.38
Michigan	24,533	3.88	3.02	9.88	2.26	1.28
Oklahoma	9,541	1.51	1.19	3.89	2.23	1.27
Minnesota	13,282	2.10	1.70	5.56	2.17	1.23
Arizona	16,814	2.66	2.17	7.10	2.15	1.22
Ohio	25,148	3.97	3.53	11.55	1.98	1.12
Pennsylvania	23,132	3.65	3.87	12.66	1.66	0.94
Louisiana	8,110	1.28	1.41	4.61	1.60	0.91
South Dakota	1,475	0.23	0.27	0.88	1.52	0.86
Georgia	16,938	2.68	3.18	10.40	1.48	0.84
South Carolina	8,141	1.29	1.54	5.04	1.47	0.83
Tennessee	10,359	1.64	2.05	6.71	1.40	0.80

Mississippi	4,506	0.71	0.90	2.94	1.39	0.79
North Carolina	12,512	1.98	3.14	10.27	1.11	0.63
Maryland	4,367	0.69	1.83	5.99	0.66	0.38
Alaska	472	0.07	0.22	0.72	0.60	0.34
Florida	13,365	2.11	6.44	21.07	0.58	0.33
Virginia	4,523	0.71	2.58	8.44	0.49	0.28
Hawaii	734	0.12	0.43	1.41	0.47	0.27
Washington	3,628	0.57	2.28	7.46	0.44	0.25
Nevada	1,412	0.22	0.92	3.01	0.43	0.24
Oregon	895	0.14	1.27	4.16	0.20	0.11
New Hampshire	287	0.05	0.41	1.34	0.19	0.11
Delaware	167	0.03	0.29	0.95	0.16	0.09
Connecticut	221	0.03	1.08	3.53	0.06	0.03
New Jersey	504	0.08	2.69	8.80	0.05	0.03
New York	272	0.04	5.91	19.34	0.01	0.01
Maine	12	0.00	0.40	1.31	0.01	0.00
Massachusetts	0	0.00	2.09	6.84	0.00	0.00
California	0	0.00	11.96	39.13	0.00	0.00
Vermont	0	0.00	0.19	0.62	0.00	0.00
Idaho	0	0.00	0.53	1.73	0.00	0.00
Puerto Rico	0	0.00	0.97	3.17	0.00	0.00
District of Columbia	0	0.00	0.21	0.69	0.00	0.00
Rhode Island	0	0.00	0.32	1.05	0.00	0.00
Guam	0	0.00	0.05	0.16	0.00	0.00
U.S. Virgin Islands	0	0.00	0.03	0.10	0.00	0.00
American Samoa	0	0.00	0.02	0.07	0.00	0.00
Northern Mariana Islands	0	0.00	0.02	0.07	0.00	0.00
	633,074				1.76	