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Reinvesting in Nondefense Spending: Methodology

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Offset inflation in 2022 food price increases

Most recent data from 2022

The U.S. Department of Agriculture's Economic Research Service (ERS) collects [comprehensive data on the U.S. food system](#). We used their "Nominal food and alcohol expenditures, with taxes and tips, for all purchasers" spreadsheet to find the total expenditures on "food at home (FAH)"—column J—for both 2020 and 2021. We subtracted "home production and donations"—column I—and compared the values for the two years.

Subtracting out "home production and donations" gives the same result as aggregating the values in "Monthly sales of food, with taxes and tips, for all purchasers."

Expand Medicare

The Congressional Budget Office (CBO) [estimates](#) that lowering the Medicare eligibility age would extend the program to 7.3 million more people for \$155 billion over the 2026 – 2031 period. Annualizing \$155 billion means the program would cost \$31 billion annually. (This is a very rough estimate, as it assumes that costs are evenly distributed across years.)

Provide universal childcare

Senator Elizabeth Warren asked Moody's Analytics for a budget estimate on her [universal child care proposal](#). The program's cost was estimated at [\\$70 billion per year or \\$700 billion over 10 years](#).

House every homeless person for a year based on the number of homeless persons in 2022

Most recent data from 2022

The U.S. Department of Housing and Urban Development publishes [point-in-time estimates of total homelessness](#). The estimates are collected annually in January.

The [Annual Homeless Assessment Report](#) Part 1 summarizes the data collected, which we used to form a weighted average of the number of homeless individuals per household. We multiplied the average family size by the percent of individuals experiencing homelessness as part of a family with at least one adult and one child under the age of 18. This result was added to the percentage of individuals not included in this category (multiplied by 1, the size of their family). Finally, we divided

the number of homeless individuals by this weighted average in order to estimate the overall number of homeless families.

HUD's Emergency Housing Voucher (EHV) Dashboard includes [the total annual budget authority for the program and the total number of EHVs awarded](#) on page 5. EHVs provide unhoused and at-risk families with rental assistance. To determine the average cost of each voucher, we divided the budget authority by the number of EHVs. To obtain the total cost of providing each family with an EHV, we multiplied this average cost by the number of unhoused families calculated above.

The estimate used in our 2022 infographic uses the data from January 2020 because HUD could not collect sufficient data to estimate total homelessness in January 2021. The state of homelessness at the time was likely *significantly* more acute due to the effects of the pandemic and associated recession on household incomes. This infographic also used the Urban Institute's estimate of [the cost of supportive housing](#), rather than the cost of EHVs, as the EHV program did not exist in 2021.

The CPCC would like to thank the National Low Income Housing Coalition for their helpful input on this methodology.

Expand the Child Tax Credit for an additional year

Under the HEROES Act and ARPA, Congress expanded the child tax credit by increasing the benefit, raising the age limit, and making it fully refundable. The Tax Policy Center [estimated](#) that making these changes permanent would cost \$97 billion in the first year.

Provide renewable energy to every American household

Annual totals for 2021, the latest available data

We replicated the [National Priorities Project's methodology](#) for calculating the costs of renewable energy:

The Energy Information Administration collects [data on household energy utilization](#). Average monthly kilowatt-hour usage of households can be found in Column C of Table 5.a; we annualized this value by multiplying by 12. Next, this value was multiplied by the unweighted cost of renewable energy from the [Levelized Cost of New Generation Resources in the Annual Energy Outlook](#), using the "Total system LCOE" column before including subsidies for standalone solar energy and onshore wind energy. (Must be converted from MWh to kWh.) This column may be found in Table 1b in the 2022 report, or in the "lcoe-components" sheet of the "figure data" spreadsheet in future years.

Solar installations are assumed to be photovoltaic with single-axis tracking.

Each energy cost per household was multiplied by the number of households taken from the U.S. Census Bureau's [QuickFacts page](#).

Replace every lead pipe in the U.S

The Environmental Protection Agency (EPA) conducted a [strategic analysis of full lead service line replacement](#). While the cost estimates ranged from \$1,200 to \$12,300 per line, the average cost was \$4,700. Estimates of the number of lead service lines are similarly broad: between 6.1 and 10 million. We used the most conservative estimate (10 million from a 1991 EPA final rule), meaning that it would cost less than \$47 billion to replace every lead pipe in the U.S.

The Infrastructure Investment and Jobs Act (IIJA), passed in 2021, appropriated [\\$15 billion](#) for lead service line replacement. This leaves a deficit of between \$13.7 billion and \$32 billion, depending on the actual number of lead service lines.

Create clean energy jobs

Most recent data from 2022

The U.S. Department of Energy summarizes [comprehensive employment information about the energy sector](#). The “Fuels Employment by Technology” figure details the number of jobs related to fuel extraction, mining, and processing, and includes companies that manufacture associated machinery. We summed the values for coal, natural gas, and petroleum.

This calculation does not include the indirect employment in fossil fuel infrastructure (described as “Electric Power Generation”, “Fuel Transmission + Distribution”, and “Storage” in the DOE report). Electric Power Generation describes jobs that are directly or indirectly involved in the conversion of fuels to electricity. Examples include turbine manufacturing and power plant construction. These totals may be found in Tables 47 through 49.

We used a modified version of the [National Priorities Project’s methodology](#) to calculate the number of jobs created annually through direct investment in the clean energy sector:

Brown University’s Costs of War Project released a 2017 report on the [opportunity costs of job creation](#) through defense spending. Table A1 illustrates the number of jobs created in various sectors for every \$1 million in direct government spending. For example, for every \$1 million spent on clean energy (50% retrofits, 25% each solar and wind), 5.8 jobs are created directly, and four jobs are created indirectly (through the supply chain)—a total of 9.8 jobs.

To determine the investment needed to generate sufficient clean energy jobs to replace fossil fuel jobs, we divided \$1 million by 9.8, then multiplied the result by the number of jobs from the DOE report.

Provide universal school meals for a year

Most recent data from 2021

There are four school meal programs: the National School Lunch Program (NSLP), the School Breakfast Program (SBP), the Child and Adult Care Food Program (CACFP, for after-school/daycare), and the Summer Food Service Program (SFSP). The following calculation expands all four programs to every student enrolled in the U.S.

The Coronavirus Aid, Relief, and Economic Security Act (CARES Act) provided [\\$8.8 billion in additional funding for child nutrition programs](#) and expanded the waiver program to allow near-universal access to free school meals. Seven months later, Congress made this program into a temporary entitlement, allowing the Department of Agriculture to appropriate [“such sums as may be necessary”](#) to implement the program.

Because the expansion was in place for all of 2021, we compared the 2021 per-meal cost with the 2019 per-meal cost. We adjusted the [total cost of the 2019 school meal programs](#) (\$23 billion) to 2021 dollars using the Bureau of Economic Analysis’ [Personal Consumption Expenditures price index](#) (line 1 of Table 9), then divided it by [the number of meals served](#) (9.5 billion). We then divided the [total cost of the 2021 school meal programs](#) (\$26.8 billion) by [the number of meals served](#) (8.4 billion). Subtracting the 2019 per-meal cost from the 2021 per-meal cost allowed us to approximate the additional cost of universality (\$0.62/meal).

In 2021, 8.4 billion meals were served to approximately 58.3 million enrolled students (calculated by summing [lines 3 through 7](#) of American Community Survey [Table B14001](#)). This suggests a ratio of 144.1 meals per student. We multiplied this ratio by the additional cost per meal, and then by the most recent student enrollment count.

Hire teachers and/or give them raises based on annual compensation and hiring costs

Most recent data from 2021

The National Center for Education Statistics maintains a [count of the number of educational institutions](#) in Table 105.50. The number of public primary educational institutions is drawn from the fifth line under “Elementary and secondary schools,” listed as “Prekindergarten, elementary, and middle.”

We replicated the [National Priorities Project’s methodology](#) for calculating compensation for an elementary school teacher:

The Bureau of Labor Statistics’ [Occupational Employment and Wage Statistics](#) lists the [mean annual wage of elementary school teachers](#) (SOC code 252021). We inflated these values by an additional 40 percent to approximate fringe benefits like health insurance and pension contributions. (Middle school teachers (SOC code 252022) are paid [approximately the same as, or slightly less than](#), elementary school teachers. As a result, any of these calculations may be extended to them.)

To calculate how much it would cost to hire a dozen new teachers for each school, we multiplied these values together, then multiplied by 12.

The BLS also tabulates the number of individuals currently employed in each job. We multiplied the [number of elementary school teachers](#) (“Employment”) by their average compensation (including fringe benefits) to determine the total compensation spent on elementary school teachers. Finally, we multiplied the total compensation by 50 percent to determine the cost of a raise.

Provide universal family and medical leave for a year

CBO [estimates](#) the cost of the FAMILY Act (H.R. 1185-117) provides three months of family and medical leave benefits to employees. The gross cost is \$547 billion over the ten-year budget window. We annualized the calculation by dividing by ten, meaning the program would cost \$54.7 billion annually. (This is a very rough estimate, as it assumes that costs are evenly distributed across the budget window.) The net cost of the policy is \$22.8 billion per year, which includes an increase in payroll taxes to pay for it.

CBO also [estimates](#) the cost of a version of the Build Back Better Act (H.R. 5376-117) that included a universal paid leave subtitle. This version would have expanded 1 month of paid leave to all workers, not just those classified as employees. ([Further analysis of the differences between the two policies from the Urban Institute.](#)) The annualized cost is \$20.5 billion, assuming costs are evenly distributed across the ten-year budget window. We tripled this value to approximate a three-month benefit. Because administrative costs decrease over time, this is likely a conservative estimate.

We validated this calculation by estimating how much the FAMILY Act would cost if it covered all workers. We divided the \$54.7 billion by 6.9 percent—the Department of Labor’s estimate of [how many workers use independent contracting as a primary source of income](#). This is certainly an underestimate, as workers may be misclassified or may not understand their classification. However, even if the number of independent contractors were 50 percent higher, \$61.5 billion would still be greater, so we are using it as a conservative estimate.