

Cut Military Spending, Fund Green Manufacturing

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November 13, 2019

The Costs of Climate Change

Letting climate change continue unabated will have significant economic costs. Economists from the IMF and elsewhere have estimated costs on the order of 10% of US GDP by 2100 in the absence of climate change policies, and even with policies that limit warming to 2.6°C, climate damages are expected to cost 1-2% of GDP by 2100.ⁱ

If unchecked, climate change will wreak havoc on natural and human systems, including on the economy. One year ago, a report by the Intergovernmental Panel on Climate Change (IPCC) stressed the need and urgency to limit global warming to no more than 1.5°C above pre-industrial levels.ⁱⁱ The U.S. National Academies of Sciences, of Medicine, and of Engineering have affirmed and corroborated those findings.ⁱⁱⁱ

On the other hand, taking steps to mitigate and adapt to climate change, such as by shifting to a clean energy economy, may have short-term costs, but will also have some short-term benefits and many longer-term benefits.

How can we pay for a transition to clean energy?

Shifting from Military to Green

The Green New Deal resolution introduced in Congress by Senator Edward Markey and Representative Alexandria Ocasio-Cortez in February 2019 lays out the goals and aspirations for a Green New Deal (GND). Since then, more detailed proposals have been made, with a wide range of policies and cost estimates. Two of the more detailed proposals are from the Sanders and Warren campaigns.

By far the most ambitious and transformative of the GND proposals is from Senator Bernie Sanders, who calls for \$16.3 trillion over 10 years, or \$1.63 trillion per year in public investment.^{iv} The Sanders campaign argues that the plan, despite its high price, will ultimately pay for itself, with savings starting in the first decade and continuing beyond, resulting in net savings rather than net costs.^v The Warren campaign estimates spending on the order of \$300 billion

per year for the next decade. Half of the spending, or \$150 billion per year, is specifically targeted to Green Manufacturing.^{vi} The green manufacturing plan mobilizes green industry by using the purchasing power of the federal government to procure and stimulate demand for clean energy products such as wind and solar energy products and energy efficiency equipment and materials.^{vii}

If we reduced military spending by \$125 billion annually, as proposed by the Sustainable Defense Task Force (details below), we could use those funds to finance part of the Green New Deal. For example, most of the funding required for Warren's Green Manufacturing could be paid for through reduced military spending. More ambitious cuts in military spending could fully fund Warren's plan and fund a significant portion of the Sanders plan.

Job Creation from Green Manufacturing

Excess military spending could be shifted to domestic spending that supports green manufacturing activity in the areas of the U.S. that have been hardest hit by declines in manufacturing employment since 2000. Through government procurement of clean energy technologies, and other policies to stimulate increased clean energy manufacturing, the Green New Deal can put out-of-work factory workers back to work. By shifting from endless war to attending to domestic priorities, we can shift from causing suffering to relieving it.

Green manufacturing creates more jobs than defense spending. For every billion that we shift from defense to green manufacturing, we create a net increase of over 2,000 jobs. Employment multipliers in Garrett-Peltier (2017) show that \$1 billion of spending creates 6,900 in defense but could instead create about 9,000 jobs in a combination of solar and wind energy industries.^{viii}

If we shift \$125 billion from defense spending to green manufacturing, an additional 250,00 jobs are created.

Thus, funding green activities instead of a bloated military budget would be a net job creator. If we reduced military

spending by \$300 billion, which is the average we have spent annually from 2001 to 2019 on the Global War on Terror,^{ix} we could create over 600,000 jobs in green manufacturing and related industries.

Why We Need to Target Green Manufacturing

A decade ago, when green growth entered the national conversation in a prominent and important way, the U.S. faced an unemployment rate of about 10 percent, and what we needed most was a jobs program. At the end of 2019, the U.S. economy is basically at full employment, with an unemployment rate under four percent. But this aggregate statistic masks the fact that certain geographic areas and certain segments of the labor force are not faring so well. The US still needs job creation in targeted areas.

Between 2000 and 2017, 5.5 million jobs were lost in the manufacturing sector in the U.S., according to the Bureau of Labor Statistics. A 2018 working paper by the National Bureau of Economic Research finds that prime-age workers (those between the ages of 21 and 55) are hardest hit, particularly those with less than a high school degree.^x **As a share of employment, manufacturing accounted for 25% of jobs in 1970, just under 15% in 2000, and only 7.9% in 2018.**^{xi}

Regardless of the cause of the decline (trade, productivity, changes in regional migration patterns), the current reality is that employment in the U.S. manufacturing sector has shrunk since 2000 – both in terms of the number of people employed, as well as the manufacturing share in total employment. And there are areas in the U.S. that would greatly benefit from an upsurge in manufacturing activity, places where unemployed factory workers could be put back to work. **Prime-age workers, especially those with less than a high school or college degree, would most benefit from an increase in manufacturing activity.**

Cutting Spending While Remaining Secure

According to Pentagon projections, Department of Defense spending is projected to increase over the next decade, whether or not the US remains at war.^{xii} But there are

many options for cuts to the military budget that would not compromise American security. For instance, **the Sustainable Defense Task Force (SDTF) has found that we could reduce military spending by \$1.25 trillion over ten years and still defend the United States and its strategic interests.**^{xiii} The Task Force's recommendations include reducing active duty personnel by 10 percent; reducing unnecessary procurement or nuclear programs; eliminating the proposed Space Force program; and reducing overhead expenses by cutting back on some private contracts (details in Table 1, below). Over the next decade, \$125 billion per year could be saved or used elsewhere in the federal budget while still maintaining security.

Similarly, analyst Dan Grazier of the Project on Government Oversight testified earlier this year that eliminating failing or unnecessarily complex weapons systems and streamlining defense acquisition would both cut spending waste and make troops more secure by making their equipment more manageable and reliable.^{xiv}

The Congressional Budget Office estimates that on our current course, the national debt will increase by more than \$10 trillion over the next decade. In the CBO's 2018 report, they identified various savings, including up to nearly \$1 trillion of reduced military spending or \$100 billion per year for each of the next ten years.^{xv} (Details in Table 2, below.)

Reducing military spending gives us choices. A recent piece in the *New York Times* identified \$300 billion in annual savings from defense cuts that could be used to fully fund a Medicare for All proposal.^{xvi}

When we consider the various forms of security that are a priority for the U.S. today, we should acknowledge that **military protection is only one piece of what makes us feel secure. And if we don't arrest it, climate change is certain to make all Americans insecure.**

Sustainable Defense Task Force. 2019. "Sustainable Defense: More Security, Less Spending."

https://static.wixstatic.com/ugd/fb6c59_59a295c780634ce88d077c391066db9a.pdf

List of Options for Reducing Spending

Force Structure and Weapons Procurement Reductions	10-Year Savings Estimate (in billions)
Army Reductions and Restructuring	\$160
Marine Corps Reductions and Restructuring	\$60
Reduce U.S. Navy Personnel and Weapons Procurement	\$193
Reduce U.S. Air Force Personnel and Aircraft Procurement	\$100.5
Reduce Peacetime Troop Deployments Overseas	\$17
End Endless Wars/Phase Out OCO	\$320
Overhead and Efficiencies	
Reduce O&M Spending on Service Contracts	\$262.5
Replace Some Military Personnel with Civilians	\$16.7
Close Unnecessary Military Bases	\$20
Nuclear Weapons, Missile Defense, and Space	
Eliminate the New Nuclear Cruise Missile	\$13.3
Cancel the New ICBM	\$30
Cancel the Space Force	\$10
Cancel Ground-Based Midcourse Defense System	\$20
Cancel New Nuclear Warheads and Rollback Modernization	\$15
Include Nuclear Weapons Complex in a BRAC Round	\$10
Total Savings:	\$1.25 Trillion

Congressional Budget Office. 2018 (Dec.) "Options for Reducing the Deficit: 2019–2028"

<https://www.cbo.gov/system/files?file=2018-12/54667-budgetoptions-Introduction.pdf>

From Table 1-1. In billions of dollars.

		Range of savings 2019-2028	
		Min	Max
Option 1	Reduce the Department of Defense's Budget	248	517
Option 2	Reduce DoD's Operation and Maintenance Appropriation (Excluding Funding for the Defense Health Program)	70	195
Option 3	Cap Increases in Basic Pay for Military Service Members	18	18
Option 4	Replace Some Military Personnel with Civilian Employees	14	14
Option 5	Cancel Plans to Purchase Additional F-35 Joint Strike Fighters and Instead Purchase F-16s and F/A-18s	13	13
Option 6	Stop Building Ford Class Aircraft Carriers	10	10
Option 7	Reduce Funding for Naval Ship Construction to Historical Levels	50	50
Option 8	Reduce the Size of the Nuclear Triad	8	9
Option 9	Cancel the Long-Range Standoff Weapon	11	11
Option 10	Defer Development of the B-21 Bomber	32	32
Option 11	Modify TRICARE Enrollment Fees and Cost Sharing for Working-Age Military Retirees	11	11
Option 12	Reduce the Size of the Bomber Force by Retiring the B-1B	17	17
Option 13	Reduce the Size of the Fighter Force by Retiring the F-22	27	27
Option 14	Cancel the Ground-Based Midcourse Defense System	18	18
Option 15	Reduce the Basic Allowance for Housing to 80 Percent of Average Housing Costs	15	15
Option 16	Cancel Development and Production of the New Missile in the Ground-Based Strategic Deterrent Program	24	24
	TOTAL savings (in billions), 2019-2028	586	981

REFERENCES/ENDNOTES

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- ⁱ Kahn et al. 2019. Federal Reserve Bank of Dallas.
<https://www.dallasfed.org/~media/documents/institute/wpapers/2019/0365.pdf>
- ⁱⁱ IPCC Special Report. 2018. "Global Warming of 1.5 degC." <https://www.ipcc.ch/sr15/>
- ⁱⁱⁱ <http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=06182019>
- ^{iv} More details on the plan can be found here (accessed for this piece on Oct 23, 2019):
<https://berniesanders.com/en/issues/green-new-deal/>
- ^v Ibid. Savings total \$2.9T in first 10 years, \$21T over 30 years.
- ^{vi} Warren, Elizabeth. "100% Clean Energy for America." Medium. September 3. Retrieved Oct 15 2019 from
<https://medium.com/@teamwarren/100-clean-energy-for-america-de75ee39887d>
- ^{vii} Warren, Elizabeth. "My Green Manufacturing Plan for America." Medium. June 4. Retrieved Oct 15 2019 from
<https://medium.com/@teamwarren/my-green-manufacturing-plan-for-america-fc0ad53ab614>
- ^{viii} Employment multipliers include both direct and indirect jobs. According to Garrett-Peltier (2017), each \$1 million creates or support 6.9 jobs in defense, 8.4 in wind energy, and 9.5 in solar energy. Averaging wind and solar energy results in 8.95 jobs per \$1 million. Thus each \$1 million shift from defense to an average of wind and solar results in a net increase of $8.95 - 6.9 = 2.05$ jobs per \$1 million, or 2,050 per \$1 billion. See Garrett-Peltier, Heidi. 2017. "Job Opportunity Cost of War." Costs of War Project. Watson Institute, Brown University.
- ^{ix} Based on \$5.4 trillion spent on post-9/11 wars between 2001 and 2019, not including about \$1 trillion in future obligations for veterans' health care, according to Neta Crawford, 2019. "US Budgetary Costs of Post-9/11 Wars through FY2020 including Obligations for Future Veterans' Care: \$6.4 Trillion." Costs of War Project. Boston University and Brown University.
- ^x Charles, Hurst, and Schwartz. 2018. "The Transformation of Manufacturing and the Decline in U.S. Employment." NBER working paper no. 24468. <https://www.nber.org/papers/w24468>
- ^{xi} Data from 1970 and 2000 from FRED, Federal Reserve Bank of St Louis, "Percent of Employment in Manufacturing in the United States (Discontinued)," retrieved Oct 25 2019 from <https://fred.stlouisfed.org/series/USAPEFANA>. Data for 2018 from BLS Employment Projections, "Employment by Major Industry Sector," retrieved Oct 25 2019 from <https://www.bls.gov/emp/tables/employment-by-major-industry-sector.htm>
- ^{xii} https://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2020/fy2020_Budget_Request_Overview_Book.pdf.
- ^{xiii} Center for International Policy, 2019, *Sustainable Defense: More Security, Less Spending*,
https://static.wixstatic.com/ugd/fb6c59_59a295c780634ce88d077c391066db9a.pdf.
- ^{xiv} <https://www.pogo.org/testimony/2019/04/smaller-budgets-will-result-in-a-more-effective-military/>
- ^{xv} CBO, 2018 (Dec). "Options for Reducing the Deficit: 2019 to 2028." Tables 1-1 and 1-2.
<https://www.cbo.gov/system/files?file=2018-12/54667-budgetoptions-Introduction.pdf>
- ^{xvi} Koshgarian, Lindsay. 2019. "We Don't Need to Raise Taxes to Have 'Medicare for All'." *New York Times*. Oct 17.
<https://www.nytimes.com/interactive/2019/10/17/opinion/medicare-for-all-funding-military.html> These cuts include ending war funding, closing some foreign bases, reducing nuclear spending and eliminating or scaling back production of unnecessary equipment, and more.