

Annual Report



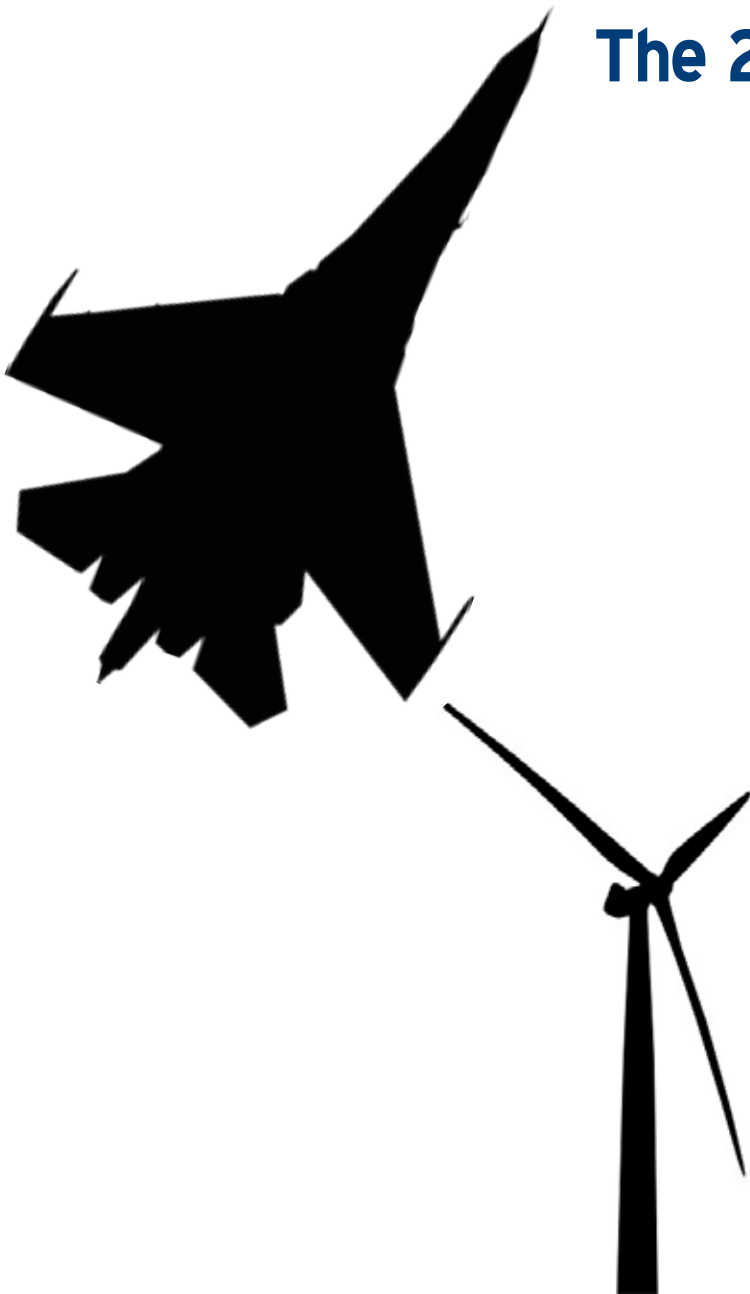
MILITARY VS CLIMATE SECURITY

The 2011 Budgets Compared

By MIRIAM PEMBERTON
with JONATHAN GLYN

Foreign Policy In Focus
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Executive Summary

The U.S. military now recognizes climate change as a security “threat multiplier.” Since 2008 the Institute for Policy Studies has been measuring the extent to which federal spending is being reallocated to reflect that perception. Between FY 2008 and FY 2011 the federal climate change budget more than doubled, from \$7.4 billion to \$18.1 billion. As a result, the gap between federal spending on military as opposed to climate security was cut more than in half. In 2008 the U.S. budgeted \$94 on tools of traditional military force for every dollar spent on climate. That ratio will narrow to \$41 to \$1 in the 2011 fiscal year.

This is progress, obviously. But a shift of one percent of the military budget does not come close to bringing climate security investment in line with the magnitude of the threat. China’s performance in this regard is far superior. Though its military spending is not wholly transparent, the range of estimates makes it clear that China spends between \$2 and \$3 on its military for each \$1 it spends on climate. China spends one-sixth as much as the United States does on military security, and twice as much on climate security.

Introduction

At the end of August, President Obama announced the end of our combat operations in Iraq. “Unfortunately, over the last decade,” he said, “we have not done what is necessary to shore up the foundation of our own prosperity. We have spent over a trillion dollars at war, often financed by borrowing from overseas. This, in turn, has shortchanged investments in our own people.”

In his speech to a joint session of Congress soon after taking office, Obama outlined what his priority investments would be. First on the list was clean energy: “We know the country that harnesses the power of clean, renewable energy will lead the 21st century.”

In 2008, the Institute for Policy Studies began measuring our country’s progress in shifting federal resources that have been concentrated for the past decade on war toward “investments in our own people.” We have focused on investment in technology to reduce greenhouse gases in part because of the growing recognition, across the political spectrum and within the military itself, that doing so is a security imperative.

Climate Security

The catalyst for this thinking was a 2007 study, “National Security and the Threat of Climate Change,” by a group of many of the nation’s highest-ranking retired military officers. It concluded that climate change can act as a “threat multiplier” for instability in some of the most volatile regions of the world.¹

In April 2009, two members of the group responded to the view that the financial crisis required a delay in significant action to arrest climate change. “As lifelong war fighters and military planners,” they wrote, “we respectfully disagree...Measured in today’s international security terms, think of the crises in Darfur and Somalia today, on a much larger scale, with increased conflict intensity, happening at the same time, in more places around the world.

“These threats are real, and translate into very serious national security concerns. Countries near the brink will be pushed closer to—and over—the edge as crop production declines, hunger and illness increase and water resources ebb...The current financial crisis is no reason to delay. Rather it gives us great impetus to act now.”²

Beginning in 1994, the Woodrow Wilson Center’s Environmental Change and Security Program was largely alone in focusing on the security implications of climate change. During the past two years, however, most of the security think tanks in Washington have begun to follow suit. There is, for example, the Brookings Institution’s Energy Security Initiative,³ the Center for a New American Security’s “Natural Security”⁴ project on climate change and security, and the Partnership for a Secure America’s policy statements (“Climate Change Threatens All Americans”) and climate change events⁵ around the country. It is a new focus of attention similar to the wave of projects on terrorism that were created following 9/11.

With the publication of the latest Quadrennial Defense Review (QDR), attending to climate security also became an official part of our national security strategy. ⁶ The QDR asserts the link between climate change, energy security and economic stability, and enumerates two effects climate change will have on Defense Department (DoD) operations. First, landscape and weather changes will reshape DoD’s operating environment and missions, potentially increasing demand for defense support and humanitarian aid. And second, DoD will need to make adjustments to its own installations; the report cites a finding by the National Intelligence Council that more than 30 U.S. military bases will be threatened by the projected sea-level rise. The QDR promises policy development to manage the effects of climate change on DoD missions, international cooperation on environmental issues, and efforts by the service branches to build energy efficiency and green technology into its operations.

What it does not do is discuss the reallocation of its own resources that is necessary to deal with this new threat.

A resource shift is necessary

The military should be commended for taking significant steps to identify and take the measure of this major new security threat. And its work to reduce its own carbon footprint is also important, since it is still the largest institutional greenhouse gas producer in the world. But its investment in this effort remains modest: According to the federal climate change budget, the Defense Department allocated \$143 million to climate security in FY 2011 (\$83 million less than in FY 2010), or approximately two-hundredths of 1 percent of the \$ 739 billion budget.⁷

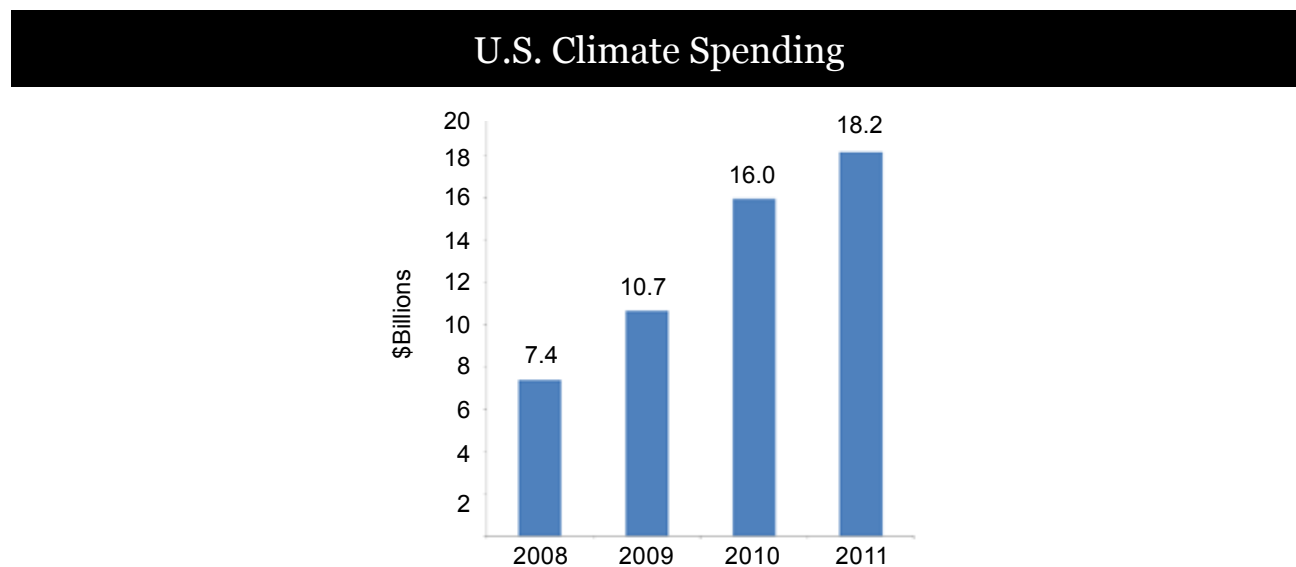
And more importantly, it is quite apparent that military greening alone will not be a sufficient response to this threat. Countering this global “threat multiplier” will require wholesale greenhouse gas reductions across the U.S. (and global) economy. If the threat is as large and consequential as the military itself says it is, therefore, budget allocations must be shifted accordingly. Federal spending must be reapportioned so that some of the resources currently applied to traditional military tools are redirected to greenhouse gas reduction measures that apply across our economy.

Here we offer our 2010 report card on the balance of spending between these traditional military instruments and the tools of climate security.

The good news

Federal expenditures on climate change, as reported to Congress annually by the Office of Management and Budget, have increased steadily over the past four years:

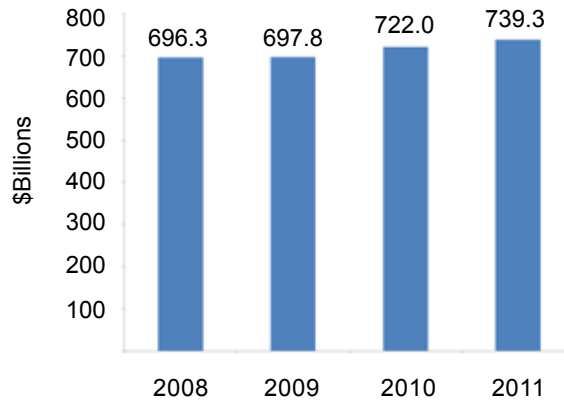
During this period, these expenditures have increased by 146 percent.



Source: “Federal Climate Change Expenditures: Report to Congress,” Office of Management and Budget, June 2010.⁸

Military expenditures have also increased during the same period, but at a slower relative rate:

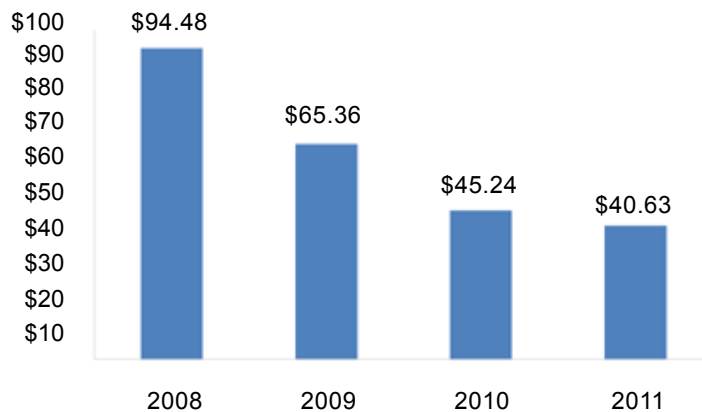
U.S. Military Spending



Source: Center for Strategic and Budgetary Assessments, Analysis of FY11 Defense Budget;⁹ figures on DoD climate spending from “Federal Climate Change Expenditures: Report to Congress, June 2010” have been deducted from these yearly totals, to avoid double-counting.

In 2008, the dollars devoted to military security outnumbered those allocated to climate security by a factor of 94:1.10 Because climate spending has more than doubled since then, that ratio has now been cut more than in half. It is now 41:1.

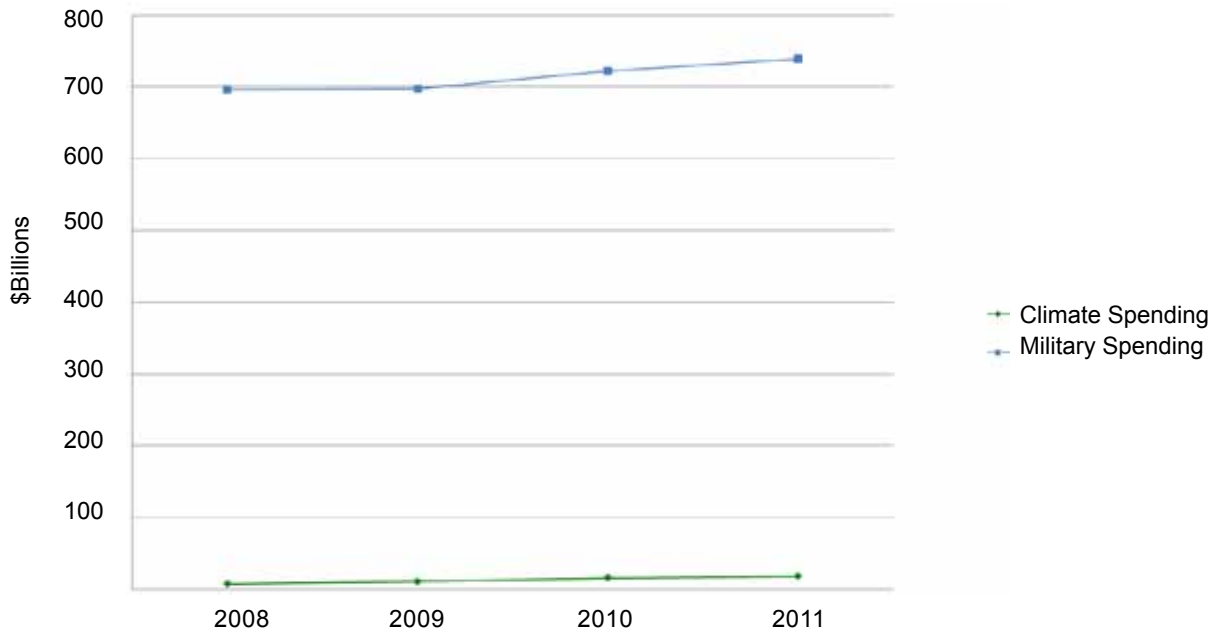
Military Dollars for Every One Dollar Spent on Climate



The bad news

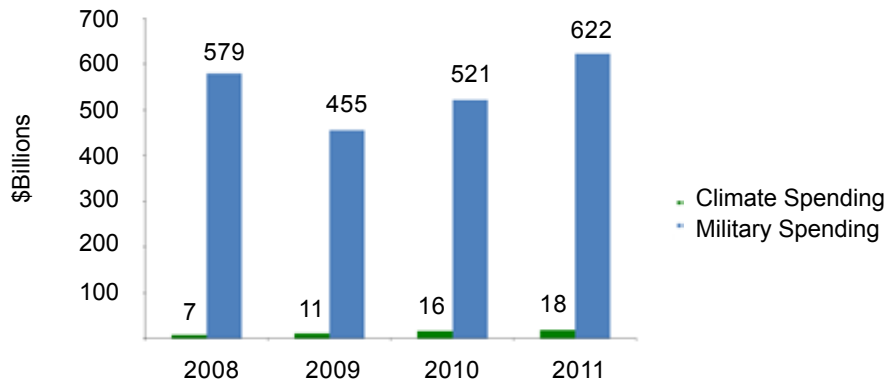
The trajectories of spending on military and climate security follow parallel tracks, but these tracks remain far apart:

Military vs. Climate Spending



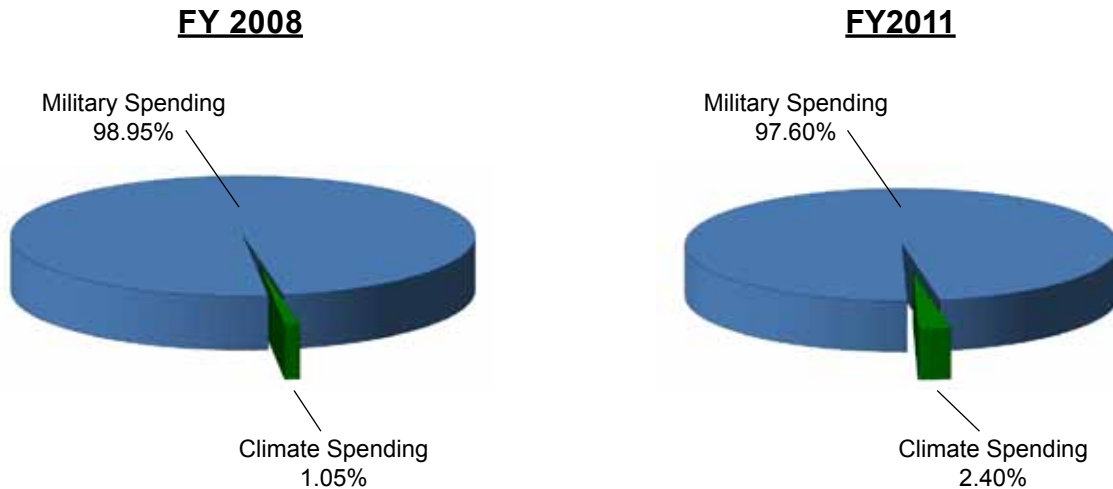
Here's another view:

Climate vs. Military Spending



The change in relative expenditures on these two priorities, considered as a whole, is unimpressive:

Climate vs. Military Spending



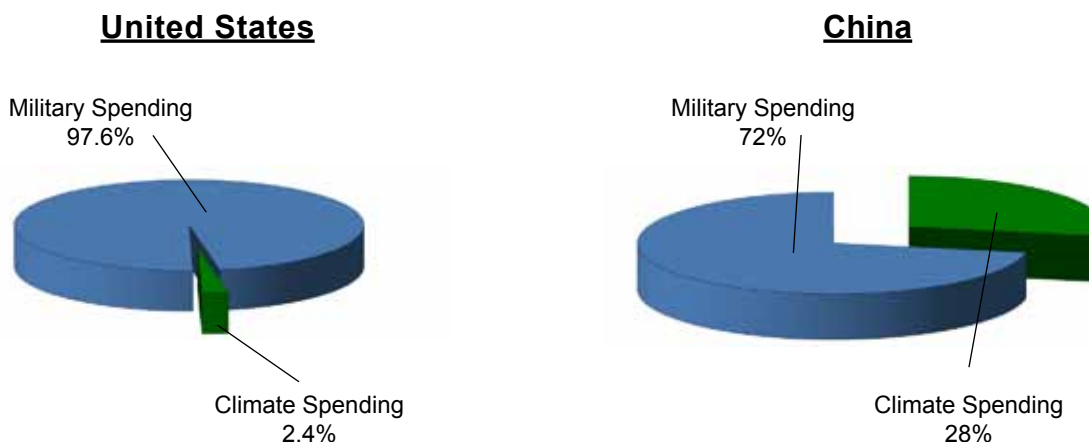
In his 2007 Nobel Peace Prize acceptance speech, Al Gore challenged the nations of the world to mobilize to restrain climate change “with a sense of urgency and shared resolve that has previously been seen only when nations have mobilized for war.” Is the change indicated in the graphics above commensurate with this sense of urgency? We submit that it is not.

Responsibility for this inadequate record of progress must be shared. Congress has failed to pass legislation providing resources and incentives to propel a concerted national transition to greenhouse gas-reducing technologies. The Obama administration has proposed an FY 2011 military budget—and plans for the future that would continue—spending increases, though at a slower rate. These would be increases to a budget that already equals half the world’s total, and is more than the United States has spent, in real terms, at any time in our history save during World War II. Savings from “the end of our combat mission in Iraq,” moreover, will not in fact be reapplied to “investments in our own people,” but will be used to expand the mission in Afghanistan.

Our competitors

In his debut address to Congress, Obama pointed out that “it is China that has launched the largest effort in history to make their economy energy-efficient.” The Chinese government has acted aggressively and proactively, encouraging green projects and new technologies through funding and regulation. In three years China’s market share in the solar industry has soared from just 3 percent to over 50. percent. Experts expect it to become the world

United States vs. China



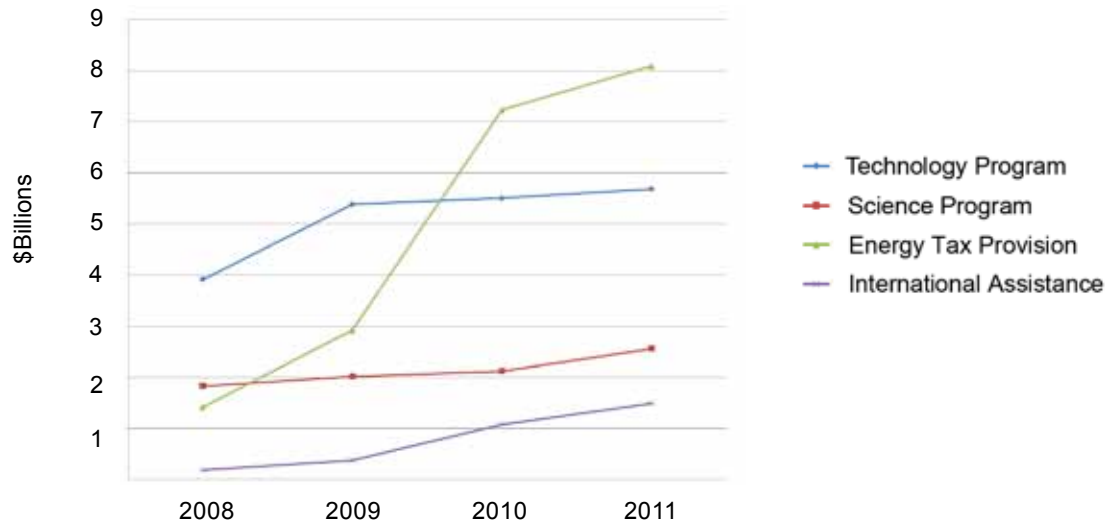
leader in wind energy generation this year.¹¹ According to analysis by American Businesses for Clean Energy, a coalition of more than 5,000 large and small U.S. companies, since the Senate abandoned clean energy legislation in July over \$11 billion worth of job-creating green energy investments have been made in China and other leading countries such as Germany and Korea.¹² Obama has acknowledged the United States' failure to match its competitors: "We invented solar technology, but we've fallen behind countries like Germany and Japan in producing it. New plug-in hybrids roll off our assembly lines, but they will run on batteries made in Korea." The United States, now experiencing high levels of unemployment, is missing a clear opportunity to act on climate change and secure green jobs. Its competitors are reaping the benefits.

Public investment is a key driver of the booming green economies in these countries. According to the Pew Charitable Trusts, China's clean energy budget in 2009 was \$34.6 billion, almost twice that of the United States.¹³ Meanwhile, although China is widely portrayed as a rising military power, its military spending remains a fraction—perhaps one-sixth—of the U.S. total. The Chinese government acknowledges spending \$70.3 billion in 2009 on its military. This figure is contested: The Stockholm International Peace Research Institute (SIPRI), for instance, estimates China's military expenditures at \$84.9 billion.¹⁴ Even if this second figure is more accurate, the ratio of military to climate change spending in China is between 2 and 3 to 1. Compare this to the current ratio of 44 to 1 in the United States. Our economic health and competitiveness in one of the major growth markets in the global economy depends upon narrowing it.

U.S. spending on climate change

The Office of Management and Budget breaks out its budget of expenditures on climate change into four major categories: technology, science, taxes and international assistance. Here are the budget trends in these categories:

Climate Change Spending by Category



| | 2008 | 2009 | 2010 | 2011 |
|--------------------------|-------|-------|-------|-------|
| Technology Program | 3.917 | 5.386 | 5.504 | 5.69 |
| Science program | 1.836 | 2.023 | 2.122 | 2.561 |
| Energy tax provision | 1.42 | 2.92 | 7.23 | 8.09 |
| International assistance | 0.188 | 0.373 | 1.08 | 1.494 |

Tax provisions

The United States' failure thusfar to put a price on carbon is one key reason our progress in cutting greenhouse emissions has been slow. In the absence of this tool to propel a green transition, the Obama administration has tried to provide another, in the form of several new tax credits. It has prioritized this mechanism above other parts of the climate change budget, increasing spending from \$1.4 billion in 2008 to \$8.1 billion in 2011. The two largest expenditures have been applied to the New Technology Credit and the Credit for Energy Improvements to Existing Homes, each receiving about 15 percent of this part of the budget.

Climate change technology program

Funding for technology development—on, for example, better solar, wind, and geothermal energy generators as well as more energy-efficient buildings and advanced technology vehicles—constitutes the second-largest segment of the climate change budget. Funding for all these programs has increased in FY 2011, but only by 3.5 percent over 2010 levels, from 5.5 to 5.7 percent.

Climate change science program

What was in 2008 the second-largest portion of the climate change budget now makes up only a quarter of the total. Funding is split between government agencies and funds for independent academic research. Over half the budget goes to NASA; Obama has explicitly directed the agency to accelerate the development of new satellites to monitor developments such as the shrinking polar ice sheets.

International assistance

Developed countries are largely responsible for climate change, and developing countries are bearing, and will bear, a disproportionate share of its effects. As the largest cumulative greenhouse gas emitter, the United States bears the largest responsibility to assist developing countries in adapting to climate change and effecting a transition to clean technology. Yet the international assistance budget remains the smallest item in our portfolio of climate change spending. It has, however, increased from \$0.2 billion to \$1.5 billion, or almost 700 percent, since 2008.

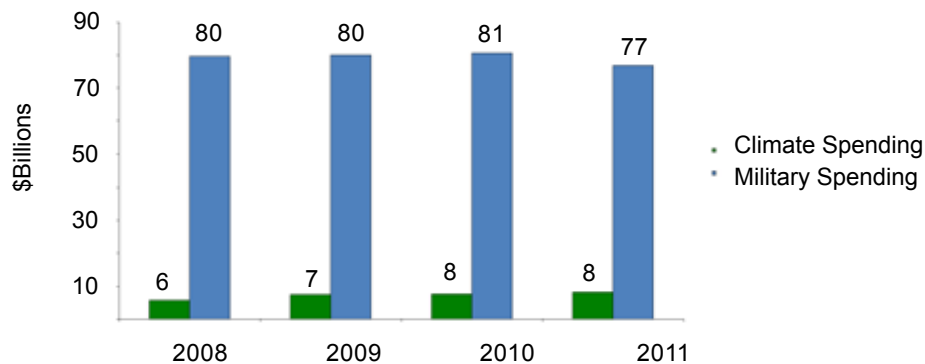
Military and climate spending compared: Research and development

R&D spending has special significance as an indicator of future trends as well as current priorities. The comparison of R&D spending on climate and on traditional military measures follows the trend in overall spending on these two priorities: The FY 2011 budget narrows a gap that remains unacceptably wide.

R&D spending on climate combines the two categories OMB breaks out as Technology and Research. The climate change R&D budget increased from \$7.62 billion in FY 2010 to \$8.25 billion in FY 2011, an increase of 8 percent and a 43 percent increase over FY 2008. The roughly equivalent category in the military budget, combining spending on research, development, testing and evaluation, actually declined slightly in FY 2011, by 4.7 percent below FY 2010 levels and 3.5 percent below FY 2008, to accommodate increases in the other major categories of personnel, operations, and maintenance and procurement.

The ratio of military to climate R&D spending in FY 2011 is 9:1, compared to 14:1 in 2008.

R & D Climate vs. Military



Military and climate spending compared: International assistance

The United States continues to spend far more money on arming foreign countries than on helping them with a green transition. The Obama administration is making a major push to export U.S. weaponry. While a recently proposed sale of \$60 billion in military aircraft to Saudi Arabia is not subsidized, many other arms transfers are. According to Pentagon and State Department budget documents, total security assistance funding administered by the two departments exceeds \$33 billion for FY 2011. William Hartung of the Arms and Security Initiative at the New America Foundation calculates that approximately \$7.1 billion of that amount will directly subsidize arms and military training, including \$4.6 billion for the Foreign Military Financing (FMF) program, \$2 billion for Coalition Support Funds, and \$500 million for the Section 1206 Global Train and Equip program.¹⁵

Compare this to the \$1.2 billion allocated for international assistance in the climate change budget. The United States spends six times as much on international military assistance, conservatively calculated, as on climate change assistance.

Jobs

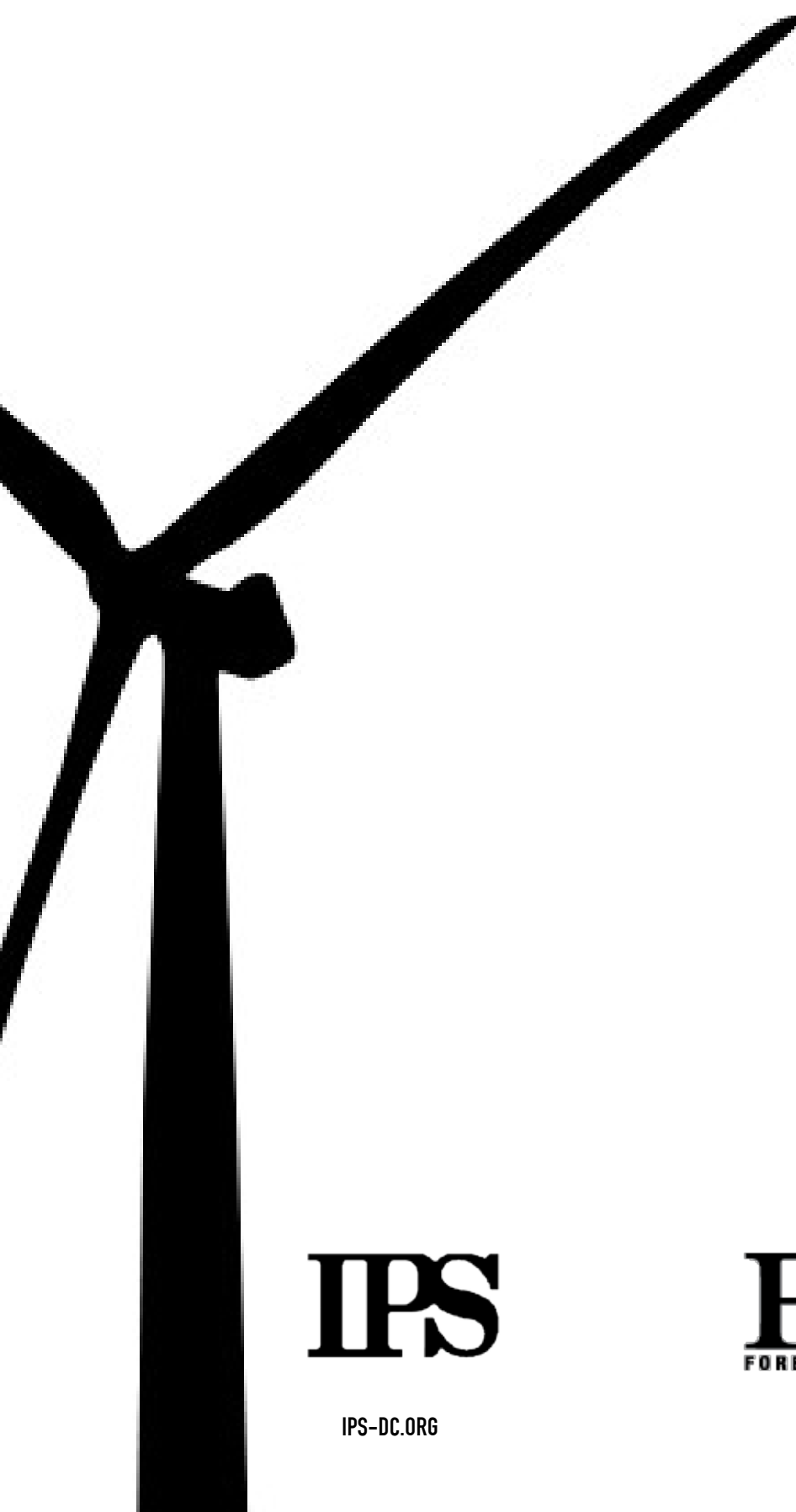
A 2009 study by the Political Economy Research Institute at the University of Massachusetts at Amherst found that each \$1 billion invested in clean energy technology will generate approximately 17,100 well-paying jobs, as compared to 11,600 jobs generated by the same amount invested in military technology.¹⁶

Conclusion

For security reasons, environmental reasons, and economic reasons, an accelerated resource reallocation from the military to the climate change budget makes sense for America.

Endnotes

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