

Assuring the Viability of the U.S. Aerospace and Defense Industrial Base

An AIAA Information Paper

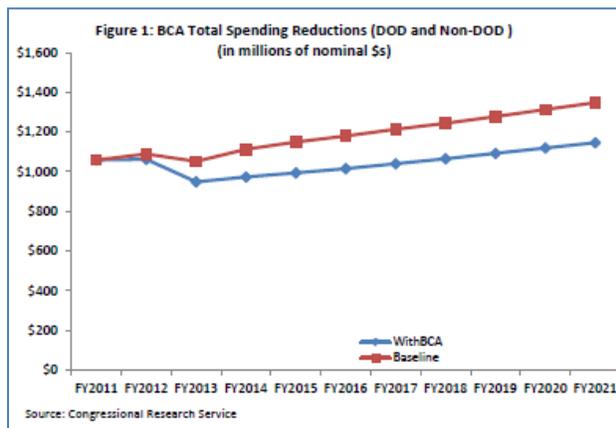
ABSTRACT

The continued stability of the U.S. aerospace and defense (A&D) industrial base is critical to our economy, national security, infrastructure, and future workforce. The A&D industry is facing one of its greatest challenges as Congress and the administration deal with mounting national debt and the need to balance the federal budget. All federal agencies face significant budget reductions, with the Department of Defense (DoD) potentially bearing the biggest burden. While all areas must be examined to identify unnecessary spending that can be reduced or eliminated to help lower the federal budget deficit and national debt, we must make sure that the nation's future is not mortgaged to address today's crisis. To maintain our technological advantages that provide national and economic security, we must employ sound budgetary and contracting principles that allow for the long-term development and manufacture of complex aerospace systems and architecture necessary to accomplish strategic national goals.

ISSUE BACKGROUND

The aerospace and defense industry supports 3.5 million jobs. It is the nation's largest manufacturing exporter and contributes 2.23% of the Gross Domestic Product (GDP). Small businesses generate almost half of private sector jobs, 64% of net new private sector jobs, and 43% of high-tech employment, and are responsible for 33% of exports.¹ The industry's workforce is highly skilled and leads our nation in global competitiveness, providing current and future opportunities for young people to have high-paying careers that will keep the industry strong for the future while advancing our national and economic security.

The Budget Control Act of 2011 (BCA) provided for two major categories of federal spending reductions: (1) discretionary spending caps that became effective in FY 2012; and (2) automatic spending reductions that became effective on March 1, 2013.



The Congressional Research Service has analyzed the federal spending reductions mandated by the BCA. This analysis confirms that these cutbacks result in a significant reduction in federal spending beginning in FY 2013. Under the BCA, the federal budget reductions reduce spending levels from a “baseline” trajectory as shown in this figure.

In July 2012, Dr. Stephen Fuller, a noted economist at George Mason University,

reported in “The Economic Impact of the Budget Control Act of 2011 on DOD and non-DOD Agencies”ⁱⁱⁱ that sequestration would have the following impact on the national economy:

- 2.14 million American jobs at risk;
- \$109.4 billion total loss of workers' wages and salaries;
- 1.5% U.S. unemployment rate increase

The A&D industrial base possesses unique capabilities and expertise needed to address the unique and diverse missions required by both their civil and military customers. Small business is the backbone of the American economy and technology innovation. Many of these businesses are sole suppliers of critical components that go into major weapons, aircraft, spacecraft, and satellite systems. Federal policy is

specifically directed toward fostering small businesses as an important part of the supply chain. In 2011, 20% of DOD prime contracts and 35% of DOD subcontracts (measured in dollars) were awarded to small businesses.ⁱⁱⁱ Similarly, in 2011, 18% of NASA prime contracts went to small businesses and 38% of its subcontracts were awarded to small firms.^{iv}

The domino effect of reduced federal budgets will undoubtedly force some companies out of business and still others to scale back significantly, resulting in single-source suppliers or perhaps no domestic supplier for items on the critical development path. If those capabilities are allowed to erode in this lean budget environment, this nation could become technologically bankrupt and unable to address future threats to our national security or economic stability when they arise.

While the largest budget cuts are expected to impact the DOD, both NASA and the National Oceanic and Atmospheric Administration (NOAA) will be severely impacted as well. Under sequestration, NASA experienced an 8.2% cut for fiscal 2013 and further cuts over the next eight years. This impact would also be a major blow to those geographic regions with high concentrations of aerospace activity where space companies that directly support NASA missions are located.

In the case of NOAA, the importance of maintaining satellite vigilance of weather conditions cannot be overemphasized. Over 90% of all observation data used in three- to seven-day weather forecasting is acquired by these satellites.^v

The FY2014 Bipartisan Budget Act provides some relief from sequestration for Fiscal Years 2014-15, and the FY2014 Omnibus Appropriations Act supports that relief for the current fiscal year. However, they do not affect planned cuts for the extended duration of the BCA from FY2016-22. Further, legislative proposals to allow for more flexibility among the agencies have been met with mixed outcomes. In April 2013, when faced with a growing reality of widespread flight delays caused by sequestration-related Federal Aviation Administration (FAA) staffing shortages, Congress acted swiftly to provide flexibility within the FAA to continue core operations while shifting sequestration impacts to lower priorities within the agency. However, other agencies have been prevented from employing the same priority-based shifting, and have continued to cut operations and programs indiscriminately across the board.

Because of the high complexity of aerospace systems, development times span across several congresses and in some cases through and across administrations. Current federal R&D investment and systems acquisitions trends have forced traditional aerospace technologies contractors to rethink their strategic business models.^{vi} Rather than employing across-the-board cuts, companies are aligning operations in areas that allow them to highlight market differentiating capabilities and drive down costs. Without reform to the federal budget and acquisitions process, this shift in how these companies are forced to operate stands to systemically change their ability to develop and manufacture new complex aerospace technologies necessary for long-term national priorities.

ⁱ AIA Second to None, 9/19/12

ⁱⁱ The Economic Impact of the Budget Control Act of 2011 on DOD and non-DOD Agencies, Stephen S. Fuller, Ph.D., George Mason University, July 17, 2012

ⁱⁱⁱ DOD FY 2011 Small Business Procurement Scorecard as referenced in “The Economic Impact of Sequestration on Small Business,” September 20, 2012, AIA Second to None.

^{iv} NASA FY 2011 Small Business Procurement Scorecard as referenced in “The Economic Impact of Sequestration on Small Business,” September 20, 2012, AIA Second to None.

^v The Economic Impact of the Budget Control Act of 2011 on DOD and non-DOD Agencies, Stephen S. Fuller, Ph.D., George Mason University, July 17, 2012 – AIA Second to None

^{vi} Next-Generation Affordability in Aerospace and Defense: Transforming Capabilities and Costs, Martin, Brukaradt, Adams, and Beckey; Booz & Company, 2011.