CONGRESSIONAL BUDGET OFFICE
U.S. Congress
Washington, DC 20515

Peter R. Orszag, Director

May 9, 2007

Honorable Ellen O. Tauscher
Chairman
Subcommittee on Strategic Forces
Committee on Armed Services
U.S. House of Representatives
Washington, DC 20515

Dear Madam Chairman:

In response to your request of April 20, 2007, the Congressional Budget Office has completed a preliminary assessment of the cost of the Missile Defense Agency's and Air Force's plans for developing, fielding, and operating a fleet of airborne lasers (ABL) as part of the ballistic missile defense system. CBO estimates that appropriations of $24 billion to $36 billion (in 2008 dollars) would be needed to complete development of the ABL system, purchase the aircraft, and operate them for 20 years.

The current ABL design consists of a megawatt-class chemical laser installed aboard a highly modified Boeing 747 aircraft. The ABL would be able to detect, track, and engage hostile ballistic missiles during their boost-phase—the initial period of flight before a missile's rocket motors exhaust their fuel. The first prototype ABL, which has been in development since 1996, is nearing completion, and the first attempt to shoot down a ballistic missile is planned for the latter half of 2009. Development and testing of a second prototype is planned for 2009-2018. Under current plans, an additional seven aircraft would be purchased for operational use.

If you would like further details, we would be pleased to provide them. The CBO staff contact is Ray Hall, who can be reached at (202) 226-8841.

Sincerely,

Peter R. Orszag

cc: Honorable Terry Everett
Ranking Member

Honorable Ike Skelton
Chairman
Committee on Armed Services

Honorable Duncan Hunter
Ranking Member

Costs of the Airborne Laser System, Fiscal Year 2008 through 20 Years of Operations (in billions of fiscal year 2008 dollars)

Research and Development	Low Cost	High Cost
Airborne Laser System #1		
Design, hardware, material, and fabrication	1.0	1.0
Other support a/	0.5	0.5
Additional cost risk	0.0	0.0
	1.5	1.5
Airborne Laser System #2		
Design, hardware, material, and fabrication	3.8	4.4
Other support a/	2.5	2.8
Additional cost risk	0.3	1.4
subtotal	6.6	8.5
Subtotal, research and development	8.2	10.0
Procurement (seven Airborne Laser systems)		
Airborne Laser System #3		
Hardware, material, and fabrication	1.1	1.6
Other support a/	0.6	0.9
Additional cost risk	0.1	0.5
subtotal	1.8	2.9
Airborne Laser Systems #4 through #9		
Hardware, material, and fabrication	6.0	8.3
Other support a/	4.4	6.1
Additional cost risk	0.6	3.2
	11.0	17.6
Subtotal, procurement	12.8	20.6
Total Acquisition Costs	21.0	30.6
Operations (20 years for each aircraft)	2.8	5.6
Total Costs	23.8	36.2
Memorandum:		
Prior Year Appropriations from 1996 through 2007	4.1	4.1

Source: Congressional Budget Office from data provided by the MDA in March 2006.

ABL = airborne laser.

Notes: Numbers may not add to totals because of rounding.

a. Other support includes the costs for contractor program management and fees, government program management, a other support activities.