

GREG PENCE
6TH DISTRICT, INDIANA

TRANSPORTATION AND
INFRASTRUCTURE COMMITTEE
SUBCOMMITTEE ON HIGHWAYS AND TRANSIT
SUBCOMMITTEE ON RAILROADS, PIPELINES
AND HAZARDOUS MATERIALS
SUBCOMMITTEE ON ECONOMIC DEVELOPMENT,
PUBLIC BUILDINGS AND EMERGENCY
MANAGEMENT

FOREIGN AFFAIRS COMMITTEE
SUBCOMMITTEE ON EUROPE, EURASIA,
ENERGY, AND ENVIRONMENT



Congress of the United States
House of Representatives
Washington, DC 20515-1406

COLUMBUS OFFICE:
555 FIRST STREET
UNIT B
COLUMBUS, IN 47201
MUNCIE OFFICE:
2810 WEST ETHEL AVENUE
MUNCIE, IN 47304
RICHMOND OFFICE:
50 NORTH 50TH STREET
2ND FLOOR
RICHMOND, IN 47374
GREENFIELD OFFICE:
18 EAST MAIN STREET
SUITE 210
GREENFIELD, IN 46140

March 12, 2020

The Honorable Pete Visclosky
Chairman
Committee on Appropriations,
Subcommittee on Defense
U.S. House of Representatives
Washington, DC 20515

The Honorable Ken Calvert
Ranking Member
Committee on Appropriations,
Subcommittee on Defense
U.S. House of Representatives
Washington, DC 20515

Dear Chairman Visclosky and Ranking Member Calvert,

As you begin work on the Fiscal Year 2021 Defense appropriations bill, I write to request that you consider the following priorities:

1. It was an honor to welcome the 127th Cyber Battalion to the Hoosier state last year. As the seventh largest Army National Guard contingent in the nation, I urge you to fully fund the **National Guard Regional Cyber Security Training Center Pilot Program** (PL 115-232) to support the establishment of a Cybersecurity Training Center at the Indiana National Guard's Atterbury-Muscatatuck complex. The Indiana National Guard's existing capabilities, programs and infrastructure – such as being home to the Department of Defense's only live, full-scale cyber range – make the Hoosier state an ideal location for a Cybersecurity Training Center.
2. Support funding level of \$100 million for **Generators and Associated Equipment Account** to allow to produce Advanced Medium Mobile Power Sources and Power Units. This equipment is the latest mobile generator used by the Department of Defense, providing a comprehensive set of solutions to military power generation needs.
3. Support the following report language to define and urge investment into directed energy systems demonstrating “**endless magazine**”:

On January 7, 2020, Iran launched more than twenty ballistic missiles at two air bases housing American service members in Iraq. On September 14, 2019 the Saudi Aramco oil processing facilities at Abqaiq and Khurais were attacked, reported to be eighteen unmanned air systems and three missiles, destroying considerable oil infrastructure and temporarily disrupting 5% of the world's oil production capability. As highlighted by senior Department of Defense leadership, this strategy is likely to

be the blueprint for future attacks by adversaries. The Committee strongly supports investments across the Department of Defense in directed energy systems capable of countering the full array of incoming threats, from unmanned air systems to cruise missiles. In particular, the Committee supports development of systems with endless or near endless magazines to ensure capability to counter salvos or swarms of any size.

However, the Committee is concerned that while the Department of Defense has included reference to near endless magazine in its budget justifications for high energy laser systems, it has not defined these terms sufficiently to facilitate predictable requirements development and guide internal investment by industry. The Committee included FY2021 legislative language providing a definition for endless magazine. Furthermore, the Committee calls for the Secretary to provide to Congress an analysis of alternatives, including relative capabilities, cost, and logistical implications, prior to the acquisition of any system which provides a capability of less than endless magazine.

4. Support bill language to define “**endless magazine**”, promote its inclusion in future high energy laser systems, and require an analysis of alternatives for systems that will not be capable of “endless magazine”:
 - 1) *For high energy laser systems, endless magazine shall be defined as the rate necessary to counter highly complex, nearly simultaneous incoming threats, of the type for which the system was designed to counter, without temporary cessation of fire for:*
 - a. *Battery recharge or exchange*
 - b. *Thermal management*
 - c. *Other predictable technical limitation*
 - 2) *Except in the case of airborne applications, endless magazine shall be provided as a standalone capability within the envelope of the platform, without the need for external devices or trailers.*
 - 3) *Each Acquisition strategy for a high energy laser system shall include a plan to achieve endless magazine in initial fielding or subsequent iterations.*
 - 4) *Within 90 days of issuing an Acquisition strategy described in (3), the Secretary of Defense shall provide a report to Congress on the criteria described (1)-(3).*
 - 5) *Prior to any acquisition determination which results in a capability less than an unlimited magazine, the Secretary shall submit to Congress an analysis of alternatives, including their relative capabilities, cost and logistical implications.*
5. Support a funding level of \$154,436,000 for the **Future Long Range Assault Aircraft (FLRAA)** program. This funding will ensure the long term success of this critical Army

modernization program. With additional resources, consistent with army modernization strategies, the timeline for FLRAA can be accelerated to ensure Army Aviation is positioned to help achieve the Secretary of the Army's drive for increased lethality by 2028.

6. Support \$23,133,000 for the **Attack and Utility Replacement Aircraft** in the Navy Research, Development, and Evaluation Account. This program is being run by the U.S. Marine Corps in conjunction with the Army's Future Long Range Assault Aircraft.
7. Support the establishment of a Defense Advanced Research Projects Agency (DARPA) funding line for **Reusable High Mach Turbine Engine**. This request will build on DARPA's Advanced Full Range Engine Program, continuing development and test activities of an operational class turbine reusable engine capable of Mach speeds. To accompany this request, I also support the following report language calling for the development of a **high Mach and hypersonics aircraft strategy**:

Congress has a well-established record of concern about the threats posed by hypersonic weapons and the imperative to develop offensive and defensive hypersonic weapons systems. The Fiscal Year 2020 Department of Defense Appropriations Conference Report includes \$100,000,000 to establish a Joint Hypersonics Transition Office, to develop and implement a roadmap for hypersonics. Further, the report accompanying the House Department of Defense Appropriations Act for Fiscal Year 2020 included language encouraging Air Force research into reusable hypersonic propulsion technologies including high Mach turbines.

The Committee is also aware of ongoing efforts to mature technologies necessary to develop aircraft capable of flight above Mach 3, known as high Mach, and above Mach 5, known as hypersonic. These aircraft have the potential to greatly expand operational capability and flexibility in intelligence, surveillance, and reconnaissance, responsive space access, payload delivery, and transport.

Within 180 days of passage of this Act, the Committee directs the Under Secretary of Defense for Research and Engineering to develop and report to Congress on the capability gaps to be filled by high Mach and hypersonic aircraft, an acquisition strategy, and a plan to release requirements in 2021. The Committee further directs the establishment of a program manager for high Mach and hypersonic aircraft. The Secretary of Defense will provide an annual assessment to Congress on the status of high Mach and hypersonic aircraft development, including propulsion, airframe, command and control, and other associated systems.

8. Support President Trump's FY 2021 funding request for the U.S. Air Force's **B-52 Commercial Engine Replacement Program (CERP)**. This level of funding will support

the Air Force's efforts to sustain the current fleet of B-52 strategic bombers through 2050 timeframe.

9. Support a funding level of \$79 million for upgrades in **Aircraft procurement, Air Force Modification of Inservice Aircraft, Item number 92308**. This funding will continue incorporating C-130H T-56 Series 3.5 Engine Enhancement Packages into the Air Force's fleet. This is a proven technology with low risk, high reward that requires no aircraft modifications or interface changes.
10. Support funding level of \$25 million for **Powertrain Maturation of the Advanced Combat Engine (ACE), Armored System Modernization Advanced Development** in Army RDT&E funding. This technology will provide a significant increase in power density, packaging size, and efficiency compared to current engines in combat applications. This level of funding will keep the required pace for the acquisition schedule for ACE to be ready by FY24. In addition, I support the following report language to accompany the funding request:

The Committee is encouraged by the U.S. Army Ground Vehicle Systems Center's (GVSC) decision to transition into a more fuel-efficient, lower cost engine to support the Next Generation Combat Vehicle (NGCV). The Committee understands that the opposed piston engine technology, using an innovative two stroke diesel system with opposed cylinders, provides a significant increase in power density, packaging size, and efficiency compared to current engines in combat applications. These benefits will reduce fuel consumption and engine weight, allowing for an increase in and field the opposed piston engine that can increase efficiency, reduce powertrain weight, and increase vehicle capability to support the NGVC program.

11. Support \$7.5 million for the **Thermal Management System for High Energy Laser**. This funding will complete the development and transition to military specification and productionize power and thermal management for directed energy systems. To accompany this funding, I also request the following report language:

The Committee supports ongoing Department of Defense research and development activities to increase the power of high energy laser systems. This scaling is important to meet growing threats from cruise and hypersonic missiles being developed by adversaries. However, the Committee is concerned that efforts to scale laser power levels have not been accompanied by comparable lines of effort in power and thermal management. Without investing concurrently in power and thermal management, the Committee is concerned that research to increase laser power levels will be unable to transition into an operational system without considerable delay. To expedite the completion of higher power systems, the Committee is appropriating

\$7,500,000 to complete development, transition to military specification, and productionize power and thermal management systems.

12. Support the Trump Administration's full budget request for the **B-21 Raider**. This long-range stealth bomber will help project our military power anywhere in the world, a cornerstone of our national security strategy and highlighted in the 2018 National Defense Strategy.

Thank you for your consideration of these requests. Should you have questions, please contact my staff at (202) 225-3021.

Sincerely,

A handwritten signature in black ink, appearing to read 'MP', with a long horizontal flourish extending to the right.

Greg Pence
Member of Congress