



AEROSPACE - A High Tech Engine Propelling **VIRGINIA's Economy** and **Creating High Tech Jobs**

Thank you, Policy Makers, your Support and Advocacy in 2009 led to:

The FAA's recognition of the Commonwealth as "the most progressive state in the country" in enacting innovative incentives to lure space transportation companies to the state.¹

Expansion of the Virginia Aerospace Science and Technology Scholars program to 347 high school juniors statewide in 2010. The program, a partnership between the Virginia Space Grant Consortium and NASA, allows students to earn up to four college credits for an online NASA exploration-themed course and a summer academy at NASA Langley Research Center.

Enactment of Phase II Infrastructure Bond Financing for the Orbital Sciences demonstration launch of the new Taurus II rocket and eight resupply missions to the International Space Station from Virginia's spaceport, MARS.

The Rolls-Royce/UVA/Virginia Tech partnership that has enabled the universities to create the Commonwealth Center for Aerospace Propulsion Systems and the Commonwealth Center for Advanced Manufacturing resulting in \$1.48 million in new research funding for 2010.

Top Image: NASA's Max Launch Abort System successfully lifts off in July 2009 from the NASA Wallops Island Flight Facility on Virginia's Eastern Shore. **Credit: NASA**

Aerospace in Virginia

- Over 350 aerospace company locations.²
- More than 26,000 people employed directly.²
- \$5.4 billion in direct economic output.²
- \$36.7 billion (second in the nation) for U.S. DoD prime contracts; Virginia is the top ranked state for all government contracts.³
- \$641 million in NASA FY09 funding to Virginia businesses and universities.⁴
- \$1.15 billion in income and 10,295 jobs generated in FY09 by NASA Langley Research Center and NASA Wallops Flight Facility.⁵
- One of four states with an operational commercial spaceport capable of launching satellites to orbit.
- Home to U.S. DoD facilities involved in aerospace research and technology including Defense Advanced Research Projects Agency, Air Force Office of Scientific Research, National Reconnaissance Office, and the National Security Space Office.
- Virginia's Aviation System
 - 66 airports including Reagan and Dulles.⁶
 - \$10.8 billion in total economic activity generated by Virginia Aviation.⁷
 - More than 164,000 jobs generated by Virginia Aviation.⁷
 - 14,568 pilots⁸
 - 5,942 general aviation aircraft⁹
 - 60 Fixed Base Operators.¹⁰
 - 37 charter flight companies; 12 flight schools operating 98 aircraft and providing 188 jobs¹⁰
- Virginia's universities offer outstanding engineering, science and technology education and research. Virginia Tech is fifth in the nation for engineering degrees awarded.¹¹
- Home to the National Institute of Aerospace and Virginia Space Grant Consortium, robust organizations promoting science and engineering education, workforce development and research.

In 2010, VIRGINIA's Aerospace Sector asks Policy Makers to:

Support Governor McDonnell's commitment to making Virginia's Spaceport the Top Commercial Spaceport in America by:

- Increasing the Commonwealth investment in the Space Flight Authority to \$1,379,095 annually (Governor's budget line item; House Bill 30). The Authority is generating 125 six-figure jobs, 223 indirect jobs and millions in new revenue according to the Virginia Economic Development Partnership.
- Re-enacting the Virginia Space Flight Liability and Immunity Act without a sunset provision (House Bill 21).
- Increasing the Governor's Opportunity fund to promote investment in economic development and growing Virginia's aerospace sector.
- Maintaining the viability of the launch range and the greater Wallops Flight Facility community (US Navy/NOAA/NASA/ Coast Guard/MARS) by ensuring that any decisions relating to offshore drilling and wind turbine installations are implemented without an adverse impact to Virginia's future in aerospace.

Support the aviation and aerospace community in the strategic planning of Virginia's Aerospace future leveraging the Wallops Island aerospace complex to become the third leg of an economic triangle for Virginia:

- Sea - Virginia Port Authority
- Air - Dulles International Airport
- Space - Wallops Island Aerospace Complex.

Establish Virginia as a leading state for NextGen airspace, aircraft, and airport technologies by:

- Supporting the Commonwealth's initiative to become the FAA "go to state" for early implementation, test bed activities and research.
- Working with Virginia's businesses and community organizations to make them aware of opportunities created by the increased air transportation access throughout rural Virginia.

Support Virginia higher education, precollege and workforce training initiatives to build the science, engineering and technology talent pool to meet Virginia's Aerospace and High Tech Sector needs by:

- Continuing to serve as a funding partner to the Virginia Aerospace Science and Technology Scholars program offering high school juniors statewide coursework and a summer academy at NASA Langley Research Center through the Virginia Space Grant Consortium.
- Increasing funding for grants/scholarships for students majoring in science, technology, engineering and mathematics (STEM) and who will teach STEM disciplines.

Re-enact legislation to continue to Governor's Aerospace Advisory Council with stronger industry, legislative and executive engagement. (House Bills 193 and 676; Senate Bill 23)

Provide increased state investments for university-based research.

- Virginia ranks 4th in the national for its high-technology share of all business establishments -- fertile ground for economic development in new and emerging national aerospace opportunities.¹²
- YET, Virginia ranks only 38th for per capita state investment for research -- a factor that limits economic and workforce development potential in the Commonwealth. Virginia spends \$126 per capita; extremely low compared to Maryland's investment of \$452.5 and well below the national average of almost \$164.¹³

Support the Department of Aviation's (DOAV) budget at the current proposed level so that DOAV can continue to advance aviation and aerospace through:

- The new standardized economic impact model being developed by VCU and the academic consortium which will result in the development of the first Virginia Aerospace Industry Economic Impact Study and a standardized multi-industry model for all future economic impact studies within the Commonwealth.
- Development of the Aviation/Aerospace Workforce Development Plan for the Commonwealth following a similar model as the Economic Impact Study listed above.
- Implementation of new technologies and upgrades of the state's existing air navigation system identified in the 2009 Virginia Navigational Aid Study that will improve safety and access to all Commonwealth communities throughout the statewide system. Investments of \$75 million over the next 10-15 years were identified in the FAA-supported study.
- The Small Community Airport Access Program (SCAAP) to improve safety and access to our rural communities. SCAAP ensures every Virginia airport has an instrument approach and current local weather. DOAV has programmed \$2.8 million to install Automated Weather Observation Systems (AWOS) at 20 airports and approaches at 15 airports. Twelve airports will benefit from both enhancements. This initiative will allow business aircraft to file an instrument flight plan to every public-use airport in the Commonwealth - an achievement that no other state in the nation enjoys.

¹ State Support for Commercial Space Activities. Federal Aviation Administration Office of Commercial Space Transportation. 2009. Page 3.

² Virginia Economic Development Partnership, Aerospace Industry Snapshot. 2009.

³ Federal Contract Awards by Contractor State. www.USASpending.gov. 2009.

⁴ NASA Procurement Data View (NPDV) - <http://prod.nais.nasa.gov/cgi-bin/npdv/npdv.cgi>.

⁵ Economic Impact of NASA Operations in Virginia - Fiscal Year 2009, Wessex Group, Ltd. December 2009.

⁶ Virginia Airport Directory. Virginia Department of Aviation. 2008-2009.

⁷ Virginia's Statewide Multimodal Long-Range Transportation Plan, Final Report. Virginia Department of Transportation. November 2004. Figure includes airline employees and airport operations.

⁸ US Civil Airman Statistics, Annual Report. FAA. 2009.

⁹ General Aviation and Part 135 Activity Surveys - CY2008. FAA. 2009.

¹⁰ Alliance for Aviation Across America. <http://www.aviationacrossamerica.org/States.aspx>. September 2009.

¹¹ American Society for Engineering Education. Profiles and Data Book. 2007. (National rankings for B.S. degrees awarded in engineering in 2007: 1) Georgia Tech; 2) Penn State; 3) University of Illinois; 4) Purdue; 5) Virginia Tech; 6) North Carolina State University; 7) University of Michigan.

¹² National Science Board's Science and Engineering Indicators. 2008.

¹³ National Center for Higher Education Management Systems. 2007.

