



Legislative Priorities for Colorado's Aerospace Industry

The **Colorado Space Coalition** is a partnership between the State of Colorado, the Denver Metro Chamber of Commerce/Metro Denver Economic Development Corporation, several economic-development agencies, the Colorado Space Business Roundtable, members of the private sector, higher education institutions and other stakeholders. The Coalition is led by Lieutenant Governor Barbara O'Brien, Major General Andy Love, USAF (Ret.), and Ralph W. Christie, Jr.

The Coalition spans the entire state and represents diverse backgrounds, but united goals. We meet regularly to assess opportunities for Colorado's growth and to promote our space assets nationally and internationally. The Colorado Space Coalition values the Congressional Delegation's interest in and commitment to making Colorado a center of excellence for space.

Why Space Matters to Colorado

Colorado has the second-largest space economy in the United States as measured by total private employment, with more than 170,000 direct and indirect space-related jobs, a \$2.3 billion annual payroll and billions of dollars in annual revenue. Further, Colorado ranks first in the nation for private aerospace employment concentration. Colorado excels in launch vehicle, spacecraft and sensor manufacturing. Our state is also a strong competitor in the areas of ground control, navigation, remote sensing and geospatial data collection and analysis.

The U.S. Department of Defense (DoD) is a critical anchor tenant in our Colorado business base. This relationship is bolstered through our work with the National Aeronautics and Space Administration (NASA) and the National Oceanic and Atmospheric Administration (NOAA). Colorado hosts numerous laboratories that produce outstanding space science as a result of federal funds and our state's private space companies. The University of Colorado is the single largest recipient of NASA university research dollars in the nation.

Keeping Colorado Competitive

The space industry is evolving, and geographic competition has increased. Growth markets are shifting from capital-intensive manufacturing to ground support and space services. Colorado's space community views these changes as opportunities. We must respond by continuing with commercial

growth, while at the same time enhancing the ability of Colorado-based remote sensing and other cutting-edge technologies to compete here in the United States and around the world.

Diversity is the key, and Colorado provides a fertile environment for smaller aerospace start-ups that offer after-market services and low-cost, off-the-shelf products. Colorado also features an abundance of high-tech companies that are developing viable, cutting-edge technologies in support of aerospace. This new development ultimately will promote greater employment stability. The goal of the Colorado Space Coalition is to enhance and build on this diversity to make Colorado a center of excellence for space.

21st Century Aerospace Workforce

To build on our success, public and private sectors must work together on educational efforts that address workforce shortages and maintain and replenish engineers and scientists needed to keep Colorado competitive. Initiatives funded by the Workforce Innovation in Regional Economic Development (WIRED) grants and administered by the Metro Denver EDC specifically address future workforce needs.

WIRED is complemented by programs such as the Challenger Learning Center of Colorado Springs, the Space Foundation National Teacher Liaison Program, and Denver Museum of Nature and Science and university-related programs. We also must collaborate with related industries—such as life sciences, information technology and telecommunications—to maintain our high-tech, high-quality workforce. Workforce development efforts, including WIRED, support state-level initiatives and policies that promote science, technology, engineering, and math (STEM) education programs to produce our future engineers and scientists. State-level efforts also are focused on enhancing the academic, commercial and military space assets that drive the aerospace economy.

Congressional Legislative Strategies to Support Aerospace

Continued investment in Colorado's academic, military and space infrastructure is vital to making our state a center of excellence for space. The Colorado Space Coalition recommends the following strategies:

CONGRESSIONAL SPACE POWER CAUCUS – Join and actively participate with the Caucus to develop and assess the strategic value of space capabilities (programs, infrastructure, workforce, operational systems, technology, industry and academia) to ensure the prosperity, leadership and well-being of the nation. Utilize this forum to promote and advance support for aerospace and to gain visibility for Colorado's leadership in this industry. Involve the appropriate state-level space organizations to participate in this effort.

SUPPORT NASA FUNDING – Maintain support for a minimum of current funding levels through the transition in administration. Higher education participation in NASA programs is critical to developing the future workforce for the aerospace industry and providing hands-on opportunities for university research and cost-effective scientific research.

- Expand funding for small satellite programs, such as the Space Science Small Explorers (SMEX) and Earth Science Pathfinder missions.
- Urge NASA and NOAA to continue funding climate missions that provide important long-term data measurements.
- Restore funding to earth and space science programs in accordance with the 10-year surveys in these areas. Encourage NASA to involve the science community in planning, developing and implementing future missions with balanced programs within the existing fiscal constraints.
- Encourage NASA to develop risk assessments and avoidance tactics appropriate to mission type—assigning different levels of risk to manned versus non-manned missions.

REDUCE UNNECESSARY LICENSING AND EXPORT RESTRICTIONS – Support the administration’s January 2008 directive regarding export controls reform. International Traffic in Arms Regulations (ITAR) controls create unintended consequences due to the broad and vague nature of the regulations and the lengthy process time. For example, U.S. universities are unable to attract top graduate students from around the world, limiting their ability to develop the next generation of technology. Further, international interest in purchasing U.S.-produced space components suffers due to the unpredictable supply chain, which hampers business and raises competitive and security risks associated with foreign-produced technology.

- Support and encourage the continuance of administrative changes to ITAR to increase U.S. security and competitiveness.
- Work with the U.S. Department of State to pursue a statutory exemption for exports of space related items to U.S. allies, such as North Atlantic Treaty Organizations (NATO) countries.
- Remove non-critical areas where ITAR control is not necessary in order to focus security protections without creating barriers to commerce and development.

SUPPORT COLORADO’S MILITARY AND CIVILIAN SPACE RESOURCES – Continue funding of military facilities and federal labs that provide the strategic base for Colorado’s space industry. Monitor and champion funding to assure sustainable, long-term presence of vital space-related military, federal and civilian assets in Colorado.