

Compressed Gases: Essential to America's Defense Industrial Base

Compressed gases are mission-critical inputs across the U.S. defense industrial base, supporting the manufacture and operation of missiles, aircraft, ships, satellites, semiconductors, and other essential systems. To protect military readiness and supply chain resilience, **CGA urges policymakers and defense leaders to include our industry early in decisions that may affect the production, transportation, or availability of these essential materials.**

How Compressed Gases Support Military Readiness

Space, Electronics & Technology

- **Specialty gases** are essential to defense semiconductor manufacturing for radar, communications, guidance, sensors, and electronic warfare.
- **Helium** pressurizes missiles and launch vehicles, while **xenon and krypton** propel military satellites.
- **Argon, nitrogen, and reactive gases** support additive manufacturing, advanced coatings, infrared optics, and high-performance components.

Aircraft, Ships & Vehicle Readiness

- **Oxygen** supports aircrew life-support systems, while **nitrogen** is used for aircraft tires, hydraulic systems, fuel-tank inerting, purging, and maintenance.
- **Argon, oxygen, nitrogen, and carbon dioxide** support shipbuilding, depot repair, welding, cutting, and fleet maintenance.
- **Helium and specialty gases** enable leak detection, system servicing, radar waveguide pressurization, and aerostat balloons.

Life Support, Safety & Response

- **Oxygen, heliox, and trimix** support aviation, combat diving, and saturation diving.
- **Calibration gases** ensure the accuracy of CBRN detectors and submarine atmosphere-monitoring systems.
- **Carbon dioxide and clean-agent cylinders** provide fire suppression for aircraft, vehicles, ships, and military facilities.

Weapons & Defense Manufacturing

- **Argon, helium, oxygen, and nitrogen** support welding, cutting, additive manufacturing, heat treatment, and fabrication of missiles, munitions, armor, aircraft, and naval vessels.
- **Nitrogen** provides inert environments for energetics and propellant production.
- **Helium** enables leak testing of missile, torpedo, rocket, and other critical systems.

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Surge Capacity and Contingency Readiness

Periods of heightened geopolitical tension can rapidly increase demand for missiles, precision-guided munitions, aircraft operations, naval maintenance, semiconductor production, and other defense capabilities. Each of these activities depends on a reliable supply of compressed gases.

Unlike many finished components, compressed gases frequently support several defense sectors at once. A disruption affecting argon, helium, nitrogen, oxygen, specialty gases, or other essential products can therefore create consequences across multiple manufacturing and readiness programs simultaneously.

Why Early Coordination Matters

Compressed gas production depends on specialized facilities, equipment, energy, transportation, and skilled personnel, and supply cannot always be increased quickly during a disruption.

Early coordination with CGA can help identify constraints, prevent unintended policy impacts, and protect availability across defense and other critical sectors.

About Us

The Compressed Gas Association (CGA) is the trusted technical resource for the U.S. compressed gas industry. Since 1913, CGA has developed safety and technical standards that support defense, health care, manufacturing, energy and other critical infrastructure. CGA represents companies supporting more than 34,000 U.S. jobs and \$30 billion in annual economic activity, while providing policymakers with science-based expertise on safety, resilience and supply chain risks.

Resilient defense supply chains require visibility into every essential input. Compressed gases must be part of that conversation.

Our Ask

Include the compressed gas industry early in federal defense and supply chain discussions. CGA can help identify risks, prevent unintended disruptions, and protect the reliable flow of gases essential to military readiness.

Gases at a Glance

Argon	Welding, additive manufacturing, specialty coatings
Helium	Leak detection, missile and launch pressurization, cooling, semiconductors
Nitrogen	Inerting, purging, aircraft servicing, manufacturing
Oxygen	Aviator life support, medical and emergency uses, welding/cutting
Hydrogen	Heat treatment, brazing, specialized manufacturing, and fuel cells
Specialty gases	Semiconductors, sensors, radar, electronic warfare
Xenon & krypton	Satellite propulsion
Carbon dioxide	Fire suppression, fabrication and operational support

Contact Us

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