



## **Satellites and Export Credit Financing**

The United States has been a global leader in the manufacturing of spacecraft and communications satellites for half a century. The 2012 U.S. National Space Policy states that “The United States is committed to encouraging and facilitating the growth of a U.S. commercial space sector that supports U.S. needs, is globally competitive, and advances U.S. leadership.” Access to stable and ongoing export credit financing remains a significant factor in the ongoing leadership of U.S. satellite manufacturers in an increasingly competitive world. Yet the U.S. Export-Import Bank’s operating authorization is at risk, at a time when its foreign competitors are moving aggressively to provide financing for satellites that will be built overseas.

### ***Background***

Satellites are man-made objects put into stable orbit around the Earth. There are more than 1,100 satellites on orbit today, which are used to transmit communications services, provide navigational signals, monitor weather patterns and environmental change, or gather intelligence data. Satellites may be owned by governments (over 50 countries have put satellites into orbit using the launch facilities of 10 nations), or privately, by private satellite operator companies or individuals (40 percent of satellites on orbit). Most satellites on orbit are designed to provide communications services – for individual consumers (such as satellite television, satellite radio or satellite broadband), for enterprises (such as transmitting video content for television stations and cable companies, linking far-flung locations of manufacturing, banking and retail companies, or connecting airlines, maritime shipping, or cruise ships with broadband internet), and government customers (such as supporting military forces and first responders to communicate). Other privately-owned satellites provide imagery and data that supports consumer navigation, real estate, agriculture, and natural resource sectors. Satellites can provide coverage of virtually anywhere on the planet and are highly reliable platforms for connecting the world.

### ***Satellite Manufacturing and U.S. Competitiveness***

The global marketplace for the manufacture of satellites was \$15.7 billion in 2013, supporting a total global market for satellite services, spacecraft, launch and ground equipment of \$195 billion in 2013. In that year, U.S. manufacturers held a 68 percent share, up from a low of 38 percent in 2004. The strongest competition comes from French and German manufacturers, which represented 17 percent

of the global marketplace. Other firms competing in the marketplace include Russian, Japanese and, increasingly, Chinese manufacturers. There are five “prime” U.S. manufacturers of communications satellites: SSL (manufacturing in Palo Alto, CA); Boeing (El Segundo, CA); Lockheed Martin (New Town, PA), Orbital Sciences (Dulles, VA) and Northrop Grumman (Redondo Beach, CA). These “prime” manufacturers rely on hundreds of companies that supply sophisticated sub-systems, components and parts – a contract to construct even a single spacecraft can involve 100 or more companies, in addition to the prime contractor. Many of the largest and most experienced satellite component manufacturers are located in the United States, and actively seek opportunities to export their products to both American and European “prime” manufacturers.

U.S. satellite manufacturing revenues have been increasing over the past few years, thanks to a long history of space experience and technical leadership, as well as proven expertise in the highly-complex, cutting-edge spacecraft needed to support leading communications and imagery technologies. However, by number, U.S. manufacturers only built about one-quarter of all spacecraft launched in 2013, which indicates that a large number of spacecraft are currently being purchased from international manufacturers.

The largest buyers for U.S. made satellites are U.S. and international companies that operate large fleets or constellations of communications satellites. Between 2007 and 2012, there were 18 new satellite operators which purchased a total of 23 satellites as first-time buyers. Seventy-seven percent of these first time new-customer deals were awarded to non-U.S. manufacturers. In their analysis of the space industrial base, the U.S. Department of Commerce found that nearly 450 companies that manufacture space products were interested receiving U.S. government assistance with global export opportunities.

### *Satellites and Financing*

Access to financing is an increasingly critical element in winning satellite business from new satellite operators that are considering buying U.S.-made satellites. Export credit financing is a pivotal decision criterion when choosing between U.S. and international manufacturers. Most communications satellite projects range from \$300-\$600 million, including the spacecraft, launch and launch insurance. These are typically high, up-front and fixed costs, with unique risk factors, which are typically recouped over the expected 15-year lifetime of the satellite. Private financing is frequently available for large, proven satellite operators, where the private financial institution or bank is comfortable with the complexities and risks of space-based projects. However, foreign export credit agencies from countries with active satellite manufacturing sectors have been aggressive in offering competing export credit deals for new satellite operators and to encourage established operators to launch satellites for less certain opportunities. These ECAs recognize the growing importance of the sector and are extremely aggressive on behalf of their companies.

The competitiveness of U.S. manufacturers will be further buttressed by recent changes to streamline and modernize U.S. export control regulations governing satellites, which were enabled

by legislation passed by the U.S. Congress and supported by the Administration – the updated rules are expected to go into effect by the end of 2014.

The Export-Import Bank of the United States (ExIm) has become increasingly active in financing projects in the satellite sector. Since 2010, ExIm has financed 16 satellite projects worth \$4 billion, supporting an estimated 205,000 jobs domestically. Satellites have been ExIm’s fastest-growing category of financing activity, expanding from about \$50 million annually in 2007-2009, and now over \$1 billion annually. An estimated 60 percent of U.S. satellite sales have some financing by ExIm. Many of these deals have been in the form of direct loans, particularly since the global liquidity crisis which affected the availability of private lending for satellite projects. ExIm financing is also becoming more widely used to support exports of major sub-systems from U.S. component manufacturers to non-U.S. “prime” manufacturers. ExIm’s strong activity on satellite projects has allowed U.S. manufacturers throughout the supply chain to compete on equal technical and business terms as its primary international competitors.

### *Satellite Exports and the U.S. Economy*

The space industry has long been a powerful driver of the U.S. economy, both as a large-scale manufacturing employer and as an engine of technological innovation. According to the U.S. Department of Commerce, the more than 3,700 organizations that comprise the domestic space industrial base have more than 2.6 million full-time employees. The U.S. private sector for satellite manufacturing directly employed 25,000 people in 2012, according to the Satellite Industry Association. These employees tend to be highly-educated and well-compensated, earning an average of more than \$100,000 a year.

In addition to the direct benefit of astonishing breakthroughs in the immediate satellite business lines of communications and imagery, space technologists also indirectly drive scientific innovation in other high-technology sectors. Space technology has allowed the creation of artificial heart pumps, the coatings that protect the Statue of Liberty and Golden Gate Bridge, and lightweight breathing systems used by firefighters around the country. The economic benefits created by the space industry, its employees, and the technologies they produce are enjoyed by all Americans.

### *Conclusion*

Today the United States is a leader in providing completed spacecraft and satellite components to customers throughout the international commercial marketplace. The Export-Import Bank of the United States provides support to U.S. satellite manufacturing companies that levels the international playing field, as all the non-U.S. competitors have access to government-supported export credit financing. The loss of or significant restriction of ExIm would negatively impact U.S. satellite manufacturing employment, technology development, and U.S. market leadership overall.