Bipartisan Policy Center

Overview of the Low Earth Orbit Satellite Industry Video Summary

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The following is a summary of a video BPC recorded with several experts about low Earth orbit satellites.

Satellites are a significant component of the space industry. The experts we spoke with highlighted various uses for satellites that affect people in their daily lives, such as providing weather forecasts and enabling GPS.

Low Earth orbit (LEO) satellites are those closer to the earth, relative to other satellites, typically below two thousand kilometers in altitude. Their proximity to earth allows LEOs to reduce latency or lag time relative to other satellites at higher altitudes. LEOs come in various shapes and sizes, and the cost of manufacturing and the time it takes to launch LEO satellites has plummeted in recent years.

LEO satellites orbit the earth roughly every 90 minutes. Multiple LEOs are typically launched together in a constellation (a group of satellites working in a system together). The combination of orbital speed and constellation size helps a LEO satellite constellation cover a large swath or even the entire planet. LEO satellites can help provide broadband to traditionally under-served parts of the country, such as rural communities. However, LEOs also raise major policy issues, including preventing satellite collisions, how to manage debris, and allocating spectrum.