

**ORBITAL DEBRIS MITIGATION PLAN**

NGST intends to incorporate prudent vehicle design and operational techniques into GESN system to minimize orbital debris. NGST will augment its orbital debris plan in conjunction with any company or companies that it contracts with to design and construct components of its system.

The orbital debris mitigation plan adopted will be consistent with standard industry practices to ensure that all system space operations will minimize contributions to orbital debris, including measures to estimate and limit the probability of collision with known objects during in-orbit lifetime. Spacecraft design will also consider, and to the extent practicable, limit the probability that collisions with items smaller than one centimeter in diameter could cause a loss of control, and thereby prevent intended means of post-mission disposal. In addition, the plan will comply with any specific orbital debris mitigation requirements that the Commission may ultimately adopt in its pending rule making on this issue.

In general, NGST currently contemplates that its system, once implemented, would employ monopropellant thrust systems used only for orbital phasing, momentum dumping, and certain attitude maneuvers. The satellites would carry just enough fuel to ensure that operational satellite lifetimes are not limited by fuel availability. However, upon the permanent retirement from service at end-of-life, the satellites would be moved from their operational orbits to a retirement orbit using the remaining fuel. Subsequently, all remaining fuel stores would be either safed or vented, batteries would be discharged, and/or reaction wheels would be de-motorized.

The following reflects NGST's current orbital debris mitigation plan for both GESN HEO and GSO satellites:

- GSO satellites: GSO satellites will be moved up in altitude to an orbit with a final perigee greater than 300 km above GSO altitude
- HEO satellites: HEO satellites will have their perigee altitude lowered to less than 250 km such that the satellite will re-enter the atmosphere in less than 25 years

NGST will be its own prime contractor for construction of its GESN satellite system. It can thus provide the Commission, on request, with significant details concerning its final approach to orbital debris mitigation.