



NOAA SATELLITES AND INFORMATION SERVICE

NATIONAL POLAR-ORBITING OPERATIONAL ENVIRONMENTAL SATELLITE SYSTEM (NPOESS)

The National Requirement: The Nation requires a single more cost-effective space-based, remote sensing environmental observing system capable of satisfying both national security and civil requirements to protect U.S. lives and property, and the Nation's environmental, national, homeland and economic security.

NOAA's Response: The National Polar-orbiting Operational Environmental Satellite System (NPOESS) program was created by Presidential Directive in 1994 to converge the two U.S. polar weather satellite systems – the Department of Defense (DoD) Defense Meteorological Satellite Program (DMSP) and the Department of Commerce (DOC) Polar-orbiting Operational Environmental Satellite (POES) satellites while incorporating technological advances from the National Aeronautics and Space Administration (NASA). This converged system is expected to save at least \$1.3 Billion in maintenance and upgrade costs of the current DMSP and POES satellites. DOC, through NOAA, has lead operational responsibility for NPOESS, DoD through the U.S. Air Force has lead system acquisition responsibility, and NASA has responsibility for developing and inserting new technologies into the NPOESS program and providing a conduit for new instruments to move from research to operations. NPOESS will provide real-time, global and regional environmental imagery, and meteorological, climatic, terrestrial, oceanic, and solar-geophysical data. Highly advanced NPOESS instruments will deliver more accurate atmospheric and oceanographic data to support improved accuracy in medium to long-range weather forecasts and severe storm warnings, reducing loss of life and property, and advancing the national economy. These data are also critical for seasonal to inter-annual forecasts, including the early forecasting of El Niño. The aviation community will receive significant benefits in terms of more accurate and timely forecasts and warnings. Improved wildfire monitoring, and enhanced frost, hail, and flood warnings will benefit the agriculture industry. A better understanding of ocean winds, waves, and currents will lead to improved vessel routing for safety and fuel savings. Weather significantly affects all aspects of military operations. NPOESS data will provide military leaders better situational awareness critical to combat planning, achieving air superiority, and winning war with minimum casualties. NPOESS data will help maximize combat effectiveness through improved coverage and distribution of atmospheric and space environmental conditions.

The FY 2005 Request will continue the Acquisition and Operations (A&O) phase of the NPOESS Shared System Performance Responsibility contract that was awarded to Northrop Grumman in August 2002. The funds will support preparations for the 2006 launch of the NPOESS Preparatory Project - a critical risk reduction mission for NPOESS, and ensure that the first NPOESS satellite will be available for launch in 2009.

Partners and Customers: DOC through NOAA, DoD through the Air Force, and NASA have partnered to develop NPOESS, with critical support from the commercial space industry.

Financing: The FY 2005 Budget Request of **\$307.6 million** is DOC/NOAA's portion of the total \$615.3 million required to continue development of the NPOESS. DoD U.S. Air Force will provide \$307.7 million.

For additional information: www.ipo.noaa.gov and www.nesdis.noaa.gov

