



NATIONAL ENVIRONMENTAL SATELLITE, DATA, & INFORMATION SERVICE

JOINT POLAR SATELLITE SYSTEM

The Joint Polar Satellite System is the restructured NOAA portion of the National Polar-orbiting Environmental Satellite System (NPOESS) that addresses NOAA's requirements to provide global environmental data necessary for NOAA's missions to monitor the earth, manage resources, support the Nation's economy, and protect lives and property.

Background

In 1994, the Department of Commerce (DOC), Department of Defense (DOD), and National Aeronautics and Space Administration (NASA) initiated the NPOESS program. This decision integrated the Nation's civil and military polar-orbiting meteorological satellite systems into a single, national system capable of satisfying both civil and national security requirements for space-based, remotely sensed environmental data. More recently, the NPOESS program has suffered from technical and management challenges that have resulted in schedule slips and cost overruns. An Independent Review Team (IRT), in 2009, concluded that the current NPOESS program, in the absence of managerial and funding adjustments, has a low probability of success and data continuity is at extreme risk. The Office of Science and Technology, with the Office of Management and Budget and the National Security Council, as well as representatives from each agency, examined various options to increase the probability of success and reduce the risk to data continuity.

Satellite Coverage and Data Continuity

Information about our planet is vital to our ability to plan, predict, respond, and to protect lives and property. The Administration recognizes that the Nation's system of polar-orbiting environmental satellites is vitally important and essential for supporting climate research as well as operational weather and storm forecasting for civil, military, and international partners. For this reason, the Administration's primary concern is the continuity of the polar-orbiting satellite data that the Nation has come to rely on.

The restructured Joint Polar Satellite System will continue to address NOAA's requirements to provide global environmental data used in numerical weather prediction models for forecasts, as well as provide space weather observations, search and rescue detection capabilities, and direct read-out and data collection products and services to customers. Data and imagery obtained from the Joint Polar Satellite System will increase timeliness and accuracy of public warnings and forecasts of climate and weather events, thus reducing the potential loss of human life and property and advancing the national economy.

The restructured program will better ensure continuity of crucial climate observations and weather data in the future. Data from instruments on JPSS will be used to continue long-term, in some cases almost 50 years, of satellite-based climate data records. These data records are unified and coherent long-term environmental observations and products that are critical to climate modelers and decision makers concerned with advancing climate change understanding, prediction, mitigation and adaptation strategies, policies, and science. JPSS, with its global view, will play a vital role in continuing these climate data records.

Management Changes and New Partnership Arrangement

As reported by the IRT, the NPOESS tri-agency Executive Committee process of providing management and oversight was ineffective. Beginning in FY 2010, the NPOESS program will undergo a management restructure and realignment of responsibilities that will transition the requirements to the respective agencies to manage complementary programs. The restructured system will eliminate the single system level procurement and Tri-Agency Executive Committee and enable each agency to procure those program assets which align most closely with its mission while maintaining a collaborative partnership on data sharing and ground system operations. NOAA through NASA as its acquisition agent will procure the afternoon orbit assets that support its civil weather and climate requirements and DoD will independently

procure assets for the morning orbit military mission. Both agencies will continue to share environmental measurements made by the system and support the operations of a shared common ground system.

The Administration decision for the restructured Joint Polar Satellite System will continue the development of critical earth observing instruments required for improving weather forecasts, climate monitoring, and warning lead times of severe storms. NASA's role in the restructured program will be modeled after the procurement structure of the successful Polar Operational Environmental Satellite and Geostationary Operational Environmental Satellite programs, where NASA and NOAA have a long and effective partnership. The partner agencies are committed to maintaining collaborations towards the goal of continuity of earth observations from space.

Our valuable international partnership with the Europeans will remain for support of the mid-morning orbit, and NOAA will continue to pursue additional partners for inclusion into the system. Some work remains to develop the most effective transition and alignment of

responsibilities, as well as to refine the launch readiness dates. A detailed transition plan is to be developed and implemented in the coming weeks.

Budget and Schedule

The NPOESS program has experienced several challenges to date, including schedule delays and cost increases. A change in management structure is necessary to mitigate further delays and increases, and to maintain satellite continuity. These funds will continue to transition afternoon orbit instrument asset acquisitions from DoD to NASA and will support the procurement by NASA of an NPOESS Preparatory Project (NPP)-like spacecraft for the afternoon orbit. The restructured Joint Polar Satellite System is planned to provide launch readiness capability in FY 2015 and FY 2018 in order to minimize any potential loss of continuity of data for the afternoon orbit in the event of an on orbit or launch failure of other components in the system. Final readiness dates will not be baselined until all transition activities are completed.

	OUTYEAR FUNDING ESTIMATES (BA IN THOUSANDS)						COST TO COMPLETE	
	FY10 & PRIOR	FY11	FY12	FY13	FY14	FY15	TOTAL	
JOINT POLAR SATELLITE SYSTEM (RESTRUCTURED NOAA PORTION OF THE NPOESS)	\$2,908,494	\$1,060,800	\$1,160,000	\$960,000	\$740,000	\$610,000	\$4,489,506	\$11,928,800

