

Contractor, the Government will evaluate proposals to verify that workstream performance is appropriate to the funding profile.

The available funding level for the one-year extension options is anticipated to be approximately half of the normal yearly expenditures. More information about the extension options can be found in Sections C.9.2 and C.9.3.

**Table I - Funding Profile in \$Millions (shown before 6% reserve is removed)**

		WS1	WS2	WS3	WS4	WS5	WS6	WS7	WS8	WS9	Total
Base	FY2007	\$3.666	\$5.667	\$3.667	\$1.933	\$1.933	\$1.934	\$1.07	\$0.83	\$0.58	\$21.28
	FY2008	\$3.666	\$5.667	\$3.667	\$1.933	\$1.933	\$1.934	\$1.3	\$1.0	\$0.7	\$21.8
	FY2009	\$3.666	\$5.667	\$3.667	\$1.933	\$1.933	\$1.934	\$1.3	\$1.0	\$0.7	\$21.8
Option	FY2010	\$3.666	\$5.667	\$3.667	\$1.933	\$1.933	\$1.934	\$1.3	\$1.0	\$0.7	\$21.8
	FY2011	\$3.666	\$5.667	\$3.667	\$1.933	\$1.933	\$1.934	\$1.3	\$1.0	\$0.7	\$21.8
	FY2012	\$3.666	\$5.667	\$3.667	\$1.933	\$1.933	\$1.934	\$1.3	\$1.0	\$0.7	\$21.8
	FY2013	\$3.666	\$5.667	\$3.667	\$1.933	\$1.933	\$1.934	\$1.3	\$1.0	\$0.7	\$21.8
<b>Total</b>		\$25.662	\$39.669	\$25.669	\$13.531	\$13.531	\$13.538	\$8.87	\$6.83	\$4.78	\$152.08

## **C.1 HPC Subsystem Components**

### **C.1.1 Computing Requirements**

#### **C.1.1.1 Large-Scale Computing (LSC) Component**

The Contractor shall provide a Large-Scale Computing (LSC) component at a substantial increase in sustained throughput over NOAA's current supercomputers described in Appendix A. Sustained throughput shall be measured by a throughput benchmark (see Section J) comprised of workstreams that are surrogates for NOAA's expected future workload. The metric of performance for the LSC is based on sustained throughput. The scalability of the computational platform(s) shall be measured by a benchmark designed to reveal the performance and scaling characteristics of individual codes as they are executed on different processor core counts. (Scalability is with respect to different socket counts where applicable). The scalability measure will assist the Government in evaluating performance projections.

It is required that whenever any set of resources (such as a cluster node) in the LSC fails, batch jobs using those resources must be capable of being rerun without user intervention. In this situation, only interactive sessions hosted on the failed resources will be lost, and the Subsystem shall allow users to continue to be able to login interactively. It is desirable that failover be to processor architectures that are binary-compatible with and running the same operating system and level as the failed resources. The capability of the LSC to operate in degraded mode during repairs is required. It is desirable that the LSC have no single point of failure. The Government requires an availability level (defined in C.6.1.2) of at least 96% on every Subsystem in the R&D HPCS.