⑫　主計算機部は、回転部品などの可動部分を最小にし、省電力に努めること。全ての計算機の電源ユニットは、必要最小限の消費電力のものであること。ＣＰＵの基本機能以外に自動的に省電力を行う機能を備えていること。効率の良い空調装置が利用可能なこと。

⑺　性能評価試験の概要

性能評価のために行うベンチマークテストの概要は導入説明書に示す。

⑻　総合評価の概要

落札方式は価格及び性能等の総合評価による。なお、総合評価の概要は導入説明書に示す。

2　資料及びコメントの提供方法

上記１⑵の物品に関する一般的な参考資料及び同⑹の要求要件等に関するコメント（仕様・技術資料等を含む。）並びに提供可能なライブラリーに関する資料等の提供を招請する。

⑴　資料等の提供の期限等　平成21年８月26日17時00分（郵送の場合は必着のこと。）

⑵　提供先　〒305―8506 茨城県つくば市小野川16番２号　独立行政法人国立環境研究所総務部会計課契約第一係長　河瀬　貴広　電話029（850）2321（ダイヤルイン）

3　説明書の交付　本公表に基づき応募する供給者に対して導入説明書を交付する。

⑴　交付期間　平成21年７月17日から平成21年７月31日の間の９時00分から17時00分。

⑵　交付場所　上記２⑵に同じ。

4　説明会の開催　本公表に基づく導入説明会を導入説明書交付後別途開催する。導入説明会の開催日時及び場所は、導入説明書において明示する。

5　その他　この導入計画の詳細は、導入説明書による。なお、本公表内容は予定であり、変更することがあり得る。

6　Summary

⑴　Classification of the products to be procured : 14

⑵　Nature and quantity of the products to be procured : Research Computation Facility for GOSAT 1 Set.

⑶　Type of the procurement : Buy

⑷　Basic requirement of the procurement : The new computation facility should include a computing system using general purpose GPU (hereafter GPGPU) technology, a mass file system, and network service equipments, etc.

①　The number of GPGPU in Main Computation Unit should be same as that of CPU in Main Computation Unit. The sum of Specfp_rate2006 base of all CPUs should be more than 25600. The sum of double precision floating point calculation performance of all GPGPU should be more than 27.6 TFlops (theoretical peak). The results of the benchmark test should meet the criteria of National Institute for Environmental Studies (NIES), and the testing program will be specified by NIES.

②　Memory of Main Computation Unit should be more than 3.84 TB. Memory of GPGPU should be more than 1.28 TB.

③　C and Fortran compilers which are free and open source software should be used. Parallel computation by GPGPU using these compilers should be possible.

④　An open source software, Torque, should be used as a job management software. An open source software, Maui, should be used as a job scheduler.

⑤　The facility should include front-end and information sharing servers as utility servers. Front-end servers should consist of three or more servers for computation, development, and experiment. Front-end servers should be capable of handling about 6000 jobs at the same time. Front-end servers should be accessed via ssh. Information sharing servers should be capable of information sharing via http.

⑥　A mass file system should include highly reliable, and high-speed magnetic hard disk system and highly convenient mass storage system. Capacity of the high-speed magnetic hard disk system must be 100 TB or larger, and it must be accessible directly with file sharing system by both Main Computing Unit and utility servers. The file system should be constructed by free open source file system software. The connection between the disk system and file servers should be Fibre Channel and the connections between file servers and Main Computing Unit, and file servers and front-end servers should be Infiniband.

⑦　Every switch should be non-blocking nevertheless its type. The communication among computation nodes should be full bisection connection using 20 Gbps or ore capable connection. IP connection should be more than or equal to 1Gbps and should separate the job control network and the server management network.

⑧　Mathematical libraries which can utilize GPGPU technology should be available.

⑨　The whole system should implement high-level network security measures for both protecting the systems from external attacks, internal network management of connection, monitoring, and user restrictions.

⑩　The facility should be configured flexibly according to the location within NIES. The maintenance of hardware and software should be provided for three years after its delivery. Within-a-day support should be available for troubles occurred in business hours.

⑪　The facility should have high reliability in both hardware and software. Automated operation and management are highly required. The facility should include one or more management servers which monitor all servers using open source software. The facility should notify administrators of the facility failures on servers and so on by e-mail. The facility should conduct emergency/shutdown procedures automatically in case of a nonscheduled power failure. The facility should visualize power consumptions, temperatures, and duties of CPUs and GPUs, and manage statistic information.

⑫　In Main Computation Unit, movable parts such as motors and power consumption should be reduced as much as possible. Power consumptions of power units of all servers should be minimum. The facility should have a capability to reduce power consumption automatically except CPU built-in functions. The facility should utilize high efficiency air conditioner.

⑸　Outline of Performance Evaluation Test : The introduction manual shows the outline of the benchmark test for the performance evaluation.

⑹　Outline of Total Evaluation : The successful bid depends on total evaluations of the price, the performance and the function, etc. The introduction manual shows the outline of the total evaluation.

⑺　Time-limit for the submission of the requested material : 5 : 00 PM 26, August, 2009.

⑻　Contact point for the notice : Takahiro Kawase, Contract Section, Budget and Account Department, National Institute for Environmental Studies. 16―2 Onogawa Tsukuba-shi Ibaraki-ken 305―8506 Japan. TEL 029―850―2321

意見招請に関する公示

次のとおり調達物品の仕様書案の作成が完了したので、仕様書案に対する意見を招請します。

平成21年７月17日

独立行政法人日本原子力研究開発機構

契約部長　武藤　元久

◎調達機関番号　601　◎所在地番号　08

○第21―1206―１号

1　調達内容

⑴　品目分類番号　13

⑵　購入等件名及び数量

ＬＮＧ供給設備の製作　一式

2　意見の提出方法

⑴　意見の提出期限　平成21年８月７日15時（郵送の場合は必着のこと。）

⑵　提出先　〒319―1184 茨城県那珂郡東海村村松４番地49　独立行政法人日本原子力研究開発機構　契約部　契約第１課　須藤　和規　電話029―282―1122㈹　内線41032