

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GLENN RESEARCH CENTER (GRC)
CLEVELAND, OHIO**

JUSTIFICATION FOR AN EXCEPTION TO FAIR OPPORTUNITY

PR 4200555264

I. Description of Requirement

I recommend that Glenn Research Center (GRC) issue a modification for new work under Task Order NNC13TA45T with Pratt and Whitney (P&W) Commercial under Contract No. NNC10BA12B for Fuel Manifold troubleshooting and mitigation for multi-sector rig tests at GRC, Particulate sampling test at P&W and Assistance in Uncertainty/System Analysis Studies being performed by Georgia Institute of Technology. Task Order NNC13TA45T supports the Environmentally Responsible Aviation (ERA) Phase II LOW NOX Fuel Flexible Combustor Integration demonstration project.

The proposed estimate of this new work modification is \$ 275,000.

II. Regulatory Basis for Exception to Fair Opportunity

The regulatory exception permitting other than fair opportunity is:

FAR 16.505(b)(2)(i)(B)- Only the aforementioned contractor is capable of providing the necessary supplies or services at the level of quality required because the supplies or services are unique or highly specialized.

III. Rationale In Support of Statutory Authority

In regards to the new work for fuel manifold troubleshooting and mitigation for the multi-sector rig tests at GRC, additional detailed thermal and dynamic stress analysis, troubleshooting and mitigation of P&W hardware was required to resolve fuel system barriers to allow testing to resume and meet success criteria. The new work can only be completed by P&W due to the proprietary nature of P&W hardware making them the only company that can perform under the current task order.

In regards to the new work for the particulate sampling test at P&W, NASA Glenn had the opportunity to utilize a NASA particulate measurement system to obtain emissions

and particulate samples from the high pressure full annular test with P&W's rig hardware by obtaining data on the boundary conditions inside of the full annular combustor. The new work includes the coordination between NASA and P&W to incorporate the necessary hardware and support in order to connect the particulate measurements equipment to the P&W test facility. The new work can only be completed by P&W as the NASA particulate measurement system will use the proprietary P&W hardware making them the only company that can perform under the current task order.

In regards to the new work for assistance in the system study, NASA has contracted with Georgia Institute of Technology (Ga Tech) to provide an uncertainty/systems analysis on the test results for the ERA project. Due to the proprietary nature of the test data, Ga Tech had to pursue a Non-Disclosure Agreement (NDA) with P&W. After signing the NDA, P&W was asked to participate in modeling and design discussions to allow Ga Tech to clearly understand the performance parameters. P&W was also asked to provide comments and feedback on the sources and magnitude of uncertainty predicted by Ga Tech. The new work can only be completed by P&W due to the proprietary nature of the P&W hardware engine cycles making them the only company that can perform under the current task order.

IV. Determination of Fair and Reasonable Cost

Pratt and Whitney will be required to submit a proposal to be evaluated by the Contracting Officer and COR, with support from internal Price Analysts and external organizations (e.g. DCAA, DCMA) as needed. The guidance and techniques specified at FAR 15.404 and NFS 1815.404 will be followed during the proposal evaluation. If appropriate, price analysis and technical analysis per FAR 15.404-1(b) and (e), and NFS 1815.404-1(e) will be performed to determine and negotiate a fair and reasonable price. If price analysis is not appropriate, then cost analysis and technical analysis, per FAR 15.404-1(c) and (e), and NFS 1815.404-1(e) will be performed to determine and negotiate a fair and reasonable price.

V. Actions to Remove or Overcome Barriers to Competition

P&W and UTRC are the sole designing companies that have intricately designed their proprietary combustor hardware and components to meet NASA GRC's test facilities and research requirements and also federal aviation requirements. Both P&W/UTRC are highly specialized in the design and fabrication of combustor hardware components along with numerous aviation design criteria that exists in the combustion environment. This exception to fair opportunity exists due to the fact that P&W/UTRC are the sole providers of the combustion hardware, combustor design, and engine cycle conditions required for the current lean combustor configuration and no other company can perform under the current task order.