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

JUSTIFICATION FOR AN EXCEPTION TO FAIR OPPORTUNITY

PR 4200458967

I. Description of Requirement

I recommend that GRC issue a task order on a noncompetitive basis to Pratt & Whitney (P&W) under Contract Number NNC10BA12B, through Task Order Number NNC13TA09T, for the design, fabrication, and delivery of test hardware, as well as test support for Environmentally Responsible Aviation (ERA) 35A ITD Phase 2 activities. These activities include a test of low loss fan exit guide vanes and an integrated propulsor system test in the 9'x15' wind tunnel. These tests incorporate a variety of aerodynamic and acoustic technologies with a low pressure ratio, ultra-high bypass propulsor. NASA will evaluate the aerodynamic and acoustic performance of technologies to accomplish ERA Phase 2 fuel burn and noise goals.

The estimated value of this requirement is $13,600,000, and it is anticipated that a substantial cost-share arrangement will be negotiated with P&W under Task Order Number NNC13TA09T. Purchase Request Number 4200458967 in the amount of $100,000 has been issued for this task order as initial funding for Fiscal Year 2013.

II. Statutory Basis for Exception to Fair Opportunity

The statutory exception permitting other than fair opportunity is:

10 USC 2304 c (b) (2); 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

NASA has identified that ERA's fuel burn and noise goals can be met with a low pressure ratio ultra-high bypass (UHB) engine. P&W Aircraft is the only U.S. company developing low pressure ratio, ultra-high bypass engines for aircraft of interest to the ERA project. As such, P&W is uniquely positioned to provide a propulsor model for testing at NASA GRC on this topic under the ERA Phase 2 project. This effort builds upon pre-existing, proprietary, P&W hardware. Some of the adaptive hardware that was built for Phase 1 testing will be reused in Phase 2, providing additional cost savings to the government. Further, P&W has a need to build such a propulsor and test the aerodynamic and acoustic performance of such a propulsor within the parameters of ERA Phase 2, and through discussions with

NASA, has indicated a willingness to provide this propulsor to NASA for testing. NASA will benefit greatly from this cooperative and cost share arrangement as the ERA project does not have sufficient funds to fully fund the design and fabrication of similar hardware. Finally, a Request for Information (RFI) was issued on this topic under the ERA Phase 2 project in March of 2012, and only P&W replied back with a proposal at the appropriate technical readiness level maturity for ERA project requirements.

IV. Determination of Fair and Reasonable Cost

The contractor will be required to submit adequate cost support data, and an analysis will be performed to determine the costs as fair and reasonable

V. Actions to Remove or Overcome Barriers to Competition

Propulsor technology research is an inherently competitive arena among a small group of engine companies. The various engine companies have taken unique approaches to optimize their engines. P&W has chosen to develop low pressure ratio propulsors, while other companies focus on other approaches. The understanding and improvements resulting from this propulsor model test will be publically available subject to time delay of approximately five years, providing benefits both to the government and the U.S. industry and improving competition.