

STATEMENT OF CONSIDERATIONS

REQUEST BY PARKER HANNIFIN CORPORATION FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN PATENT RIGHTS UNDER DOE PROPOSAL NO. DE-FE0000296 W(A) 2010-063

Parker Hannifin Corporation ("Parker Hannifin") has requested a waiver of domestic and foreign patent rights for all subject inventions arising from its participation under the above referenced grant entitled "Wind Turbine Electric Brake Development Project." Any subcontractors of Parker Hannifin, if there will be any, are not subject to the waiver. At this time, Parker Hannifin does not intend to use subcontractors.

The objective of this project is to develop and commercialize a new electric braking system for wind turbines. Electric brakes may offer wind turbine original equipment manufacturers and end users with several benefits overall conventional hydraulic brakes including (1) improved health monitoring, reliability and maintainability; (2) elimination of hydraulic power units, ancillary components, and associated fire threats; (3) improved braking control, and (4) lower life cycle costs. The new electric braking system is expected to reduce cost, weight, and envelope compared to some existing designs entering the market.

The total anticipated cost of the project is \$594,688 with Parker Hannifin providing approximately 20% cost share, totaling \$118,938. This waiver is contingent upon Parker Hannifin maintaining the foregoing cost sharing percentage over the course of the grant.

As noted in its waiver petition, since 1936, Parker Hannifin is a leader in the field of aircraft wheel and brake systems for the general aviation market and an existing system integrator in the wind turbine market. For example, "Parker's in-depth experience and expertise adds service life to turbines worldwide. [Parker's] blade pitch systems, shaft and yaw brake systems, filtration/cooling systems and connectors deliver reliable performance; and [Parker's] grid-tie inverter systems capture variable power from the turbine and efficiently rout [sic] it to the grid at a constant frequency while delivering exceptional power quality." Parker Hannifin has invested more than \$600,000 in developing related aircraft electric brake system technology and more than \$250,000 in wind turbine electric brake system technology. Parker Hannifin has applied for patents for electric brake systems related to aircraft and wind turbines. Parker Hannifin's experience and existing technologies and market presence indicates that Parker Hannifin is well suited to expedite the commercialization of the research, development, and demonstration results under this grant.

Parker Hannifin has agreed that this waiver shall be subject to the march-in and preference for U.S. industry provisions, as well as the U.S. Government license, comparable to those set out in 35 U.S.C. 202-204. Further, Parker Hannifin has agreed to the U.S. competitiveness provisions as attached to this Statement. In brief, Parker Hannifin has agreed that products embodying any waived invention shall be substantially manufactured in the United States, and that Parker Hannifin will not license, assign, or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements.

According to Parker Hannifin, with the patent rights to the subject invention, Parker Hannifin is more likely to invest further private funds into the continual development of electric brake technology and to be able to promote such technology in future partnerships with commercial customers. If the project is successful, the 10-year forecast is approximately 40 new jobs in the United States.

Referring to item 10 of the waiver petition, according to Parker Hannifin, it believes that granting this waiver would increase competition. Parker Hannifin has limited experience in the Wind Turbine Market. It believes the waiver would help it become a more viable competitor in an extremely competitive and specialized market.

Considering the foregoing, it is believed that granting this waiver will provide Parker Hannifin with the necessary incentive to invest its resources in commercializing the results of the grant in a manner that will make the above technology available to the public in the shortest time. Therefore, upon evaluation of the waiver petition and in view of the objectives and considerations set forth in 10 CFR 784, all of which have been considered, it is recommended that the requested waiver be granted.

[Redacted Signature]

Glen R. Drysdale
Patent Attorney
Golden Field Office

Date: 11/23/10

Based upon the foregoing Statement of Considerations and representations in the attached waiver petition, it is determined that the interests of the United States and the general public will best be served by a waiver of patent rights of the scope determined above, and therefore the waiver is granted. This waiver shall not apply to any modification or extension of the grant, where through such modification or extension, the purpose, scope, or cost of the grant has been substantially altered.

CONCURRENCE:

[Redacted Signature]

Jacques Beaudry-Losique
Program Manager
Wind and Hydropower Program

Date: 11/19/2011

APPROVAL:

[Redacted Signature]

John V. Lucas
Acting Assistant General Counsel for Technology
Transfer and Intellectual Property

Date: 1/22/2011

U.S. COMPETITIVENESS

Parker Hannifin agrees that any products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States, unless Parker Hannifin can show to the satisfaction of DOE that it is not commercially feasible to do so. In the event DOE agrees to foreign manufacture, there will be a requirement that the Government's support of the technology be recognized in some appropriate manner, e.g., recoupment of the Government's investment, etc. Parker Hannifin further agrees to make the above condition binding on any assignee or licensee or any entity otherwise acquiring rights to any waived invention, including subsequent assignees or licensees. Should Parker Hannifin or other such entity receiving rights in any waived invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in any waived invention is suspended until approved in writing by DOE.