

STATEMENT OF CONSIDERATIONS

REQUEST FOR ADVANCE WAIVER OF PATENT RIGHTS BY EAGLEBURGMANN
GERMANY GMBH&CO. KG ("EAGLEBURGMANN") UNDER DOE AWARD NO. DE-
EE0008740; W(A) 2020-001

EAGLEBURGMANN has requested a waiver of patent rights of the United States of America for all subject inventions arising from its participation under the above referenced award entitled "High-Temperature Dry-Gas Seal Development and Testing for sCO₂ Power Cycle Turbomachinery" to the Southwest Research Institute. EAGLEBURGMANN is a sub-awardee to the Southwest Research Institute. This waiver applies only to subject inventions made by EAGLEBURGMANN.

According to the waiver petition, "[c]oncentrating solar-thermal power (CSP) plants with supercritical carbon dioxide (sCO₂) power cycles requires a mechanical seal to prevent working fluid leaks and support efficient operations. The increased temperatures and pressures of the sCO₂ power cycle requires a novel seal design to support a target thermal-to-electric power conversion efficiency of 50%. This project will develop a high-temperature dry gas seal (DGS) by replacing the temperature sensitive elements with more durable components, enabling the DGS to reach operating temperatures over 500° Celsius and enable the higher efficiency levels. Because the DGS design would also be significantly smaller in size, the DGS would reduce the complexity of the sCO₂ turbine design, helping to increase operation reliability and improve turbine efficiency."

The total anticipated cost of the award is \$2,500,000. The anticipated cost for EAGLEBURGMANN's activities under the award is \$500,265 with EAGLEBURGMANN contributing \$488,015 or 97.55% cost share. The waiver is contingent upon EAGLEBURGMANN maintaining, in aggregate, a cost share percentage of least 90% over the course of the award.

The period of performance for the award is August 2019 through July 2022.

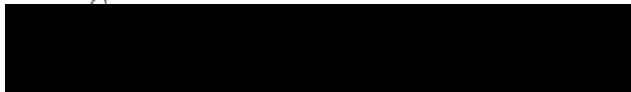
Based on the waiver petition, since 1884, EAGLEBURGMANN is a global leader in designing and manufacturing industrial sealing technology. It has more than 30 years of experience in providing dry gas seals with over 9,000 EAGLEBURGMANN dry gas seals in operations in various applications around the world. It will provide a key enabling technology in its microcrystalline diamond coating for the project in which EAGLEBURGMANN holds several patents. EAGLEBURGMANN will further contribute its experience and expertise in designing, testing and producing sealing elements based on a wide range of materials and combinations of materials

EAGLEBURGMANN 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, EAGLEBURGMANN has agreed to the attached U.S. Competitiveness provision, paragraph (t). In brief, EAGLEBURGMANN has agreed that

products embodying a waived invention or produced through the use of a waived invention will be manufactured substantially in the United States unless EAGLEBURGMANN can show to the satisfaction of the DOE that it is not commercially feasible to do so.

Referring to item 10 of the waiver petition, EAGLEBURGMANN does not believe the waiver would place it in a dominant position due to competing technologies being developed by different companies.

Considering the foregoing, it is believed that awarding this waiver will provide EAGLEBURGMANN with the necessary incentive to invest its resources in commercializing the results of the award 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.

A black rectangular redaction box covering the signature of Glen Drysdale.

Glen Drysdale
Patent Attorney
Golden Field Office

Date: _____

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 be best 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 award, where through such modification or extension, the purpose, scope, or cost of the award has been substantially altered.

CONCURRENCE:



Dr. Becca Jones-Albertus
Director
Solar Energy Technologies Office

Date: 3/5/20

APPROVAL:



Brian Lally
Assistant General Counsel for Technology
Transfer and Intellectual Property

Date: 4.2.2020