STATEMENT OF CONSIDERATIONS

REQUEST FOR ADVANCE WAIVER OF PATENT RIGHTS BY GENERAL ELECTRIC COMPANY, UNDER DOE AWARD NO. DE-OE0000908; W(A)-2019-005, CH-1814

Petitioner, General Electric Company, requested a waiver of domestic and foreign patent rights for all subject inventions arising under the above referenced award. The award is titled "DESIGN, DEPLOYMENT AND CHARACTERIZATION OF THE WORLD'S FIRST FLEXIBLE LARGE POWER TRANSFORMER". Additionally, Petitioner requested the waiver extend to its subcontractor Prolec GE. Prolec GE is a Mexico based joint venture between GE and Xignux. This waiver will not impact the rights of those parties subject to Public Law 96-517, as amended, nor shall it grant any rights in inventions made by employees of the National Laboratories.

The objective of Petitioner's award is to design, manufacture and field test a prototype flexible large power transformer (LPT) capable of replacing various existing transformers of different voltages and short-circuit impedances. The project aims to decrease the number of spare transformers maintained in inventory by utilities or other entities to ensure an adequate reserve of readily available replacement LPTs. The award includes the objectives: (1) demonstrate the performance of new multivariable gas sensors; (2) compare the capabilities of the flexible LPT utilizing nano-dielectric oil with LPTs utilizing traditional mineral based insulating oil; and (3) develop an augmented functionality transformer management relay.

The original cost of the award is $2,969,903.00 of which the Government is to contribute $2,375,922.00 in addition to Petitioner's contribution of $593,981.00 (or about twenty percent (20%)). Petitioner also provides that Prolec GE will contribute twenty percent cost share of their portion of award, which is about forty percent of the overall project. This waiver is contingent upon Petitioner and any subcontractor to which it extends maintaining, in aggregate, the above cost sharing over the course of the award. The period of performance is from October 01, 2019 to September 30, 2021.

Referring to items 5-9 of the waiver petition, Petitioner has significant experience in utility-scale and commercial power generation, power transmission and distribution. Complementing Petitioner's experience, Prolec GE has approximately 150 employees fully dedicated to research, development, and engineering of power transformers. Prolec GE is expected to be the original equipment manufacturer (OEM) for the prototype transformer, with GE and Prolec GE having filed a patent application to the transformer system. Petitioner has invested in a research laboratory which will be used for developing transformer relays for the protection of the transformer. The laboratory was previously used to develop insulating oils which will also be used in the LPT. Further, Petitioner invested in developing new gas sensors for monitoring oil-immersed power transformers. Petitioner asserts granting this waiver will aid Petitioner and its subcontractor in securing time and resources to develop prototypes, eliminate remaining technical risks, monitor

performance in the field, and to work with utility customers and industry standards bodies for adoption.

Petitioner has agreed that this waiver will be subject to the march-in and preference for U.S. industry provisions, as well as the U.S. Government license, set out in 35 U.S.C. 202-204.

Petitioner has agreed in part to the attached U.S. Competitiveness provision (paragraph (t)). Petitioner requested an exception to the U.S. Competitiveness provision for products embodying the inventions covered by U.S Patent Application No. 15/594,745, U.S. Patent Application No. 16/689,438, and improvements thereto made under the contract. Petitioner notes it conceived of the two inventions relating to the flexible large power transformer at its own expense; however, the inventions may be first actually reduced to practice under the present award thereby designating it as a subject invention subject to the terms of this agreement. After consultation with the sponsoring program and in light of the benefits noted below, U.S. Patent Application No. 15/594,745, U.S. Patent Application No. 16/689,438, and improvements thereto made under this contract may be manufactured at the Prolec GE facility in Mexico, except for innovations in the transformer relay, the gas sensor, or the transformer fluid.

In support of this request for a waiver of patent rights with a partial exception to the U.S. Competitiveness clause, Petitioner asserts several areas will benefit from the proposed transformer specific technology. Petitioner asserts that if the project is successful, the flexible transformer can be stocked and on-hand locally in the U.S., increasing flexibility to ensure a more secure and resilient grid. Petitioner asserts itself and Prolec GE will be positioned to encourage market acceptance of this technology. If successful, Petitioner believes project will provide standardization of transformer specifications for critical assets, resulting in the design and construction of more flexible substations and improving flexibility as a factor for development of new power systems. Finally, Petitioner asserts the success of the project will significantly reduce the inventory cost and number of spare units required to maintain a high grid resiliency.

Petitioner 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 otherwise excepted as noted above. Petitioner has further agreed to make the above conditions binding on any assignee or licensee or any entity otherwise acquiring rights in the waived inventions, including subsequent assignees and licensees. Should Petitioner or other such entity receiving rights in a waived invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in the waived inventions is suspended until approved in writing by DOE.

Referring to item 10 of the waiver petition, granting this waiver is not expected to have an adverse impact on competition. Petitioner points to multiple manufacturers with greater facilities and capabilities in the domestic transformer market. Further, there are several competing technological approaches being researched in the next generation of large power transformers. Since the field contains competing technologies as well as competitors performing their own research, granting this waiver will not hinder competition in this field.

Considering the foregoing, it is believed that granting this waiver will provide Petitioner with the necessary incentive to invest its resources in the commercialization of the results of the agreement in a fashion which will make the technology available to the public in the shortest practicable 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]
Michael J. Dobbs
Deputy Chief Counsel
Intellectual Property Law
U.S. Department of Energy

Date: 11/17/2020

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

CONCURRENCE:

[redacted]

Andre Pereira
Program Manager/Strategist
Office of Electricity (OE-10)
U.S. Department of Energy

Date: 11/19/2020

APPROVAL:

[redacted]

Brian J. Lally
Assistant General Counsel for Technology
Transfer and Intellectual Property (GC-62)
U.S. Department of Energy

Date: 11.20.2020

WAIVER ACTION - ABSTRACT

W(A)-2019-005

REQUESTOR	CONTRACT SCOPE	RATIONALE FOR DECISION
General Electric Company	Design, Deployment and Characterization of The World's First Flexible Large Power Transformer	Petitioner has significant experience in utility-scale and commercial power generation, power transmission and distribution, has invested in a system complementary to the large power transformers, and is positioned to encourage acceptance of the technology in the market.

(t) U. S. Competitiveness

The Contractor agrees that any products embodying any subject invention or produced through the use of any subject invention will be manufactured substantially in the United States unless the Contractor can show to the satisfaction of DOE that it is not commercially feasible. 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. The Contractor agrees that it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements. Should the Contractor or other such entity receiving rights in the invention(s): (1) undergo a change in ownership amounting to a controlling interest, or (2) sell, assign, or otherwise transfer title or exclusive rights in the invention(s), then the waiver, assignment, license, or other transfer of rights in the waived invention(s) is/are suspended until approved in writing by DOE. U.S. Patent Application No. 15/594,745, U.S. Patent Application No. 16/689,438, and improvements thereto made under this contract may be manufactured at the Prolec GE facility in Mexico, except for innovations in the transformer relay, the gas sensor, or the transformer fluid.