## STATEMENT OF CONSIDERATIONS

CLASS WAIVER OF PATENT RIGHTS FOR TECHNOLOGY DEVELOPED UNDER DOE FUNDING AGREEMENTS RELATING TO INNOVATION FOR" NEXT GENERATION TRANSFORMERS – FLEXIBLE DESIGNS"; DOE FUNDING OPPORTUNITY ANNOUNCEMENT DE-FOA-0001579; W(C)-2016-005; CH-1773

The Department of Energy Office of Electricity Delivery and Energy Reliability (OE) anticipates providing federal assistance in the form of cooperative agreements to conduct design of flexible and adaptable large power transformers (LPT) that can be readily utilized in different substations.

The objective of this funding opportunity announcement (FOA) is to stimulate designs of LPT's with a capacity rating of 100 megavolt-amperes (MVA) or greater. The designs are to promote greater standardization in order to increase grid resilience in the event of the loss of one or more LPT's. The new designs are to maintain high efficiencies, have variable impedances, accommodate various high-side and low-side voltages, and be cost-effective compared to traditional LPTs. Individual projects would be expected to involve modeling, analyses, and exploratory research to assess the performance and economics of proposed designs.

Accomplishment of the objectives of the award would create more flexible and adaptable transformers (i.e., a single design that could meet a range of specifications and installation configurations). As permanent replacements of current transformers, these next-generation transformers could be easily shared in emergency situations and have lower costs due to manufacturing at scale. Designs with new operating and installation concepts, new materials, and advanced capabilities are sought under this FOA.

DOE expects to make approximately 5 to 7 awards, in the form of financial assistance agreements, under this announcement. The DOE anticipates the availability of \$1.5 Million of Federal funding for this FOA. It is expected recipients of the cooperative agreements provide a minimum of 20% cost share in non-Federal dollars.

All types of entities are eligible to apply, including Federally Funded Research and Development Center (FFRDC) Contractors as a prime recipient or as a team member under another entity's application. However, NETL is not eligible for an award under the FOA and may not be proposed as a team member on another entity's application. At least 100% of the direct labor costs for the project (including subrecipient labor) shall be incurred in the United States,

unless the Recipient can demonstrate to the satisfaction of the Department of Energy that the United States economic interest will be better served through a greater percentage of the work being performed outside of the United States.

Considering the above, it is the purpose of this class waiver to vest title in new inventions made under DE-FOA-0001579 by large business awardees and subcontractors in a fashion enabling them to expediently commercialize the various technologies. Accordingly, DOE will waive the Government's title to subject inventions, other than inventions made by Bayh-Dole participants pursuant to P.L. 96-517, as amended, or National Laboratories, to the above identified large business entities. It is expected that patent rights will be allocated among the participants on the basis of cost for the work assigned under the funding agreements.

This class waiver of the Government's rights in inventions is subject to the usual advance patent waiver and background data licensing provisions. The terms of the patent waiver include the usual Government license, march-in rights, and preference for U.S. industry provisions comparable to those set out in 35 U.S.C. §§ 202-204. This patent waiver also includes the attached U.S. Competitiveness clause which requires that products embodying any waived invention or produced through the use of any waived invention be manufactured substantially in the United States unless the participant 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. The Contractor will further agree to make this condition binding on any assignee or licensee or any entity otherwise acquiring rights to any waived invention, including subsequent assignees or licensees. Should the Contractor 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 the waived invention is suspended until approved in writing by DOE.

The grant of this class waiver is not expected to result in adverse effects on competition or market concentration. Rather the waiver should enhance competition and growth in the large power transformer (LPT) industry of the United States. If successful, the project could promote greater standardization (i.e., commoditization) to increase grid resilience (i.e., faster recovery through greater interchangeability) in the event of the loss of one or more LPTs.

This class patent waiver is available to any large business that (1) is a recipient, or subrecipient at any tier, to a funding agreement issued under DE-FOA-0001579 and (2) is

providing at least 20% cost share for the work assigned to it under their funding agreement. The waiver will remain in effect as long as such cost sharing is maintained, in aggregate, over the term of the agreement. A large business, whether recipient or sub-recipient, that does not accept the terms of this waiver, or is otherwise ineligible may petition for an advanced or identified patent waiver.

Considering the foregoing, and in view of the statutory objectives to be obtained and the factors to be considered under DOE's waiver regulation, 10 C.F.R. 784, all of which have been considered, it has been determined that this class waiver as set forth above will best serve the interest of the United States and the general public. It is recommended that the waiver be granted.

Michael J. Dobbs

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Date: 12/13/2016

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:	APPROVAL:
Michael Pesin	Brian Lally
Deputy Assistant Secretary	Acting Assistant General Counsel for
Advanced Grid Research and Development,	Technology Transfer and Intellectual Property
OE-10	GC-62
Date: 12/21/2016	Date: 1/3/2017