

STATEMENT OF CONSIDERATIONS

REQUEST FOR ADVANCE WAIVER OF PATENT RIGHTS BY X ENERGY, LLC. UNDER DOE AWARD NO. DE-NE0008472; W(A)-2016-009, CH-1767

The Petitioner, X Energy, LLC, has requested a waiver of domestic and foreign patent rights for all subject inventions arising under the above referenced award. The award is entitled "XE-100 PEBBLE BED SMALL MODULAR REACTOR: SOLVING CRITICAL CHALLENGES TO ENABLE THE XE-100 PEBBLE BED ADVANCED REACTOR CONCEPT." 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 period of performance under this contract is from July 1, 2016 to June 30, 2021.

The objective of the Petitioner's award is the research and development of their Xe-100 design, which is a pebble-bed, high temperature, gas cooled nuclear reactor and its accompanying steam plant and components. In particular Petitioner intends to (1) further develop the pebble bed reactor design through analysis and testing (2) demonstrate fuel development and manufacturing feasibility and (3) coordinate with the NRC toward licensing requirements.

The total anticipated cost of the award is \$53,333,334.00 including the Petitioner's contribution of \$13,333,334.00, about twenty-five percent (25%) of the total cost of the work under the award. This waiver is contingent upon the Petitioner maintaining, in aggregate, the above cost sharing percentage over the course of the award.

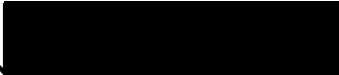
As noted in its waiver petition, the Petitioner has more than five years of experience refining the subject of this award, the Xe-100 design. Two utility patent applications and one provisional application have already been filed by the Petitioner on the Xe-100. The Petitioner has invested heavily towards the development of the reactor, with approximately \$20 million directly relating to the work to be performed under this contract. Additionally, the Petitioner provides services including fuel and structures development, hardware design and fabrication, and nuclear-grade graphite production. The Petitioner has already begun collaborations with investor owned utilities to incorporate the reactor design into a power production plant. Considering the Petitioner's technical expertise and significant investment in this technology including cost sharing in this award, it is reasonable to conclude that the Petitioner will continue to develop and ultimately commercialize the technology and products which may arise from this award.

The Petitioner 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, the Petitioner has agreed to the U.S. competitiveness provisions as attached to this Statement. In brief, the Petitioner has agreed that products embodying a waived invention or produced through the use of a waived invention shall be substantially


manufactured in the United States, and that the Petitioner will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements.

Referring to item 10 of the waiver petition, granting this waiver is not expected to have an adverse impact on competition. The market currently has several other Generation IV reactor designs, such as the array of FAST reactor designs, by other vendors which directly compete with the subject of this award. Thus, granting the Petition will not hinder competition in the field. Rather, this waiver will allow the Petitioner to increase the number of alternatives available in the field of nuclear power generation and stimulate further investment and competition.

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


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Date: 9/17/2018


Daniel D. Park
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Date: 9/17/18

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

CONCURRENCE:

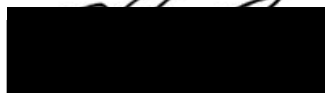


Thomas O'Connor
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NE-52

Date:

10/16/2018

APPROVAL:



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Date:

10/18/18