

Statement of Considerations

REQUEST BY GENERAL MOTORS, LLC (GM) FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN RIGHTS IN SUBJECT INVENTIONS MADE IN THE COURSE OF OR UNDER BATTELLE MEMORIAL INSTITUTE (BMI) REQUEST FOR PROPOSAL NO. 660613 UNDER PRIME CONTRACT NO. DE-AC05-76RL01830; DOE WAIVER DOCKET W(A)2022-009

GM has made a timely request for an advance waiver to worldwide rights in Subject Inventions made in the course of or under BMI Request for Proposal No. 660613 entitled, "Battery500 Consortium: High-Energy Lithium-Sulfur Batteries Pouch-Format Cell Fabrication and Non-destructive Cell Investigation" under BMI Prime Contract No. DE-AC05-76RL01830. GM will work in collaboration with Pacific Northwest National Laboratory (PNNL) to develop pouch format cell integration and fabrication, as well as a full cell failure mode diagnostic, for lithium-sulfur (Li-S) batteries to enable the Battery500 Consortium to develop rechargeable Li batteries with an energy density of 500 Wh kg⁻¹, while also maintaining acceptable cycle life of 1,000 cycles. The Battery500 Consortium is a multi-institute program supported by the Department of Energy's (DOE) Vehicle Technology Office (VTO) to develop next generation high energy, low-cost batteries for electric vehicles (EV).

The total value of the proposed cost reimbursable, cost shared subcontract is \$6.25 million with GM proposing to provide a 20% cost-share of \$1.25 million. The subcontract has a five-year period of performance.

GM's experience and expertise will contribute substantially to the development of the inventions made under the proposed subcontract. GM is a pioneer and industry leader in the field of EVs and accordingly its evidence of technical competence is voluminous. GM currently holds more than 2,000 granted and pending patents related to EV battery technology, including 60 patents and trade secrets and another 46 pending in critical areas of future battery development, such as lithium-metal electrolytes, anodes, cathodes, and binders. GM is a recognized industry leader in EV sales/leases to the general public both in the U.S. and globally. GM has a proven track record of commercializing electrified vehicle technologies, from GM's introduction of the first publicly available EV in the U.S. (the EV1 in the 1990s) to its current EV offerings and future innovations.

GM has made a significant investment of private funding which will directly assist and further promote development of the work to be performed under the proposed subcontract. GM has committed to investing \$35 billion in EVs and automated vehicles from 2020 through 2025 and is targeting annual global EV sales of more than 1 million by 2025. Of this \$35 billion, GM has already invested over \$12.8 billion in EV and battery manufacturing facilities in Ohio, Michigan, and Tennessee alone. In 2021, GM announced the Wallace Battery Cell Innovation Center on the campus of GM's Global Technical Center in Warren, Michigan, which marks a further expansion of the company's battery technology operations that will help accelerate development and commercialization of longer range, more affordable EV batteries. The \$28 million investment to expand GM's battery testing lab will make it the largest, most advanced battery test lab in the U.S.

The grant of the above-requested waiver will more effectively promote the development and commercial utilization of inventions made under this subcontract. In its goal of annual EV sales of more than 1 million by 2025, GM intends to commercialize new inventions as part of this EV production and

beyond into the future. The automotive market is highly competitive and cost sensitive and thus only the most cost-effective technologies will make it into production vehicle applications. A grant of the above-requested waiver will allow subject inventions made under the subcontract to compete for utilization with other similar technologies that GM may be currently developing at private expense.

Granting of the requested waiver should not have an undue impact on competition or market concentration. The battery technology that is the subject of this project must compete against numerous other technologies being considered for use in the automotive propulsion and battery areas. Since battery technologies are currently a significant topic of research and development expenditures of automotive and battery manufacturers due to ever increasing demands for zero emissions, the presence of numerous automotive and battery manufacturers having competing technologies in a global market will necessarily mitigate any significant anti-competitive effect that may be created through the granting of this waiver.

GM has agreed to accept the attached DOE waiver terms and conditions if the requested waiver is granted. Although GM agrees to abide by the conditions set forth at 35 U.S.C. §§ 202-204 relating to the Government license, march-in rights, preference for U.S. industry, as well as a U.S. Competitiveness provision, GM requested the following modifications to U.S. Preference and U.S. Competitiveness clauses. The VTO BatteryS00 Consortium Program Manager reviewed and concurred with these modifications:

(i) Preference for United States industry.

Notwithstanding any other provision of this clause, the Contractor agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject invention in the United States unless such person agrees that any Products embodying the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement for such an agreement may be waived by DOE upon a showing by the Contractor or its assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible. Products means high-energy lithium-sulfur batteries, including components and subcomponents thereof. For avoidance of doubt, raw materials are not considered as components or subcomponents.

(t) U.S. Competitiveness

The Contractor 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 the Contractor 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 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 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 any waived invention is suspended until approved in writing by DOE. Products means

high-energy lithium-sulfur batteries, including components or subcomponents thereof. For avoidance of doubt, raw materials are not considered as components or subcomponents.

In view of the objectives and considerations set forth in 10 CFR 784.4, all of which have been considered, it is recommended that the requested waiver for worldwide patent rights in Subject Inventions be granted.



Emily G. Schneider
Assistant Chief Counsel for
Intellectual Property

Date _____

Based on the foregoing Statement of Considerations and the representations in the attached Waiver Petition, it is determined that the interest of the United States and the general public will best be served by a waiver of U.S. and foreign patent rights, and therefore, the waiver is granted. This waiver shall not apply to a modification or extension of the subcontract where, through such a modification or extension, the purpose, scope or cost of the subcontract has been substantially altered.

CONCURRENCE:



Tien Q. Duong
Manager, BatteryS00 Consortium
Vehicle Technologies Office
Office of Energy Efficiency &
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APPROVAL:



Brian J. Lally
Assistant General Counsel for Technology
Transfer and Intellectual Property
Office of General Counsel

Date