

## STATEMENT OF CONSIDERATIONS

REQUEST BY UNITED TECHNOLOGIES RESEARCH CENTER FOR AN  
ADVANCE WAIVER OF THE GOVERNMENT'S DOMESTIC AND  
FOREIGN PATENT RIGHTS UNDER DOE CONTRACT DE-EE0003954;  
DOE WAIVER NO. W(A)2011-005; CH1597

The Petitioner, United Technologies Research Center (UTRC), has requested an Advance Waiver of the Government's domestic and foreign rights to inventions in the above cited research and development contract issued by DOE's National Energy Technology Laboratory (NETL). See attached UTRC's Petition, Answer 1.

### Subject of the R&D Contract

Title: Plug & Play Distributed Power Systems for Smart Grid Connected Building

The objective of the contract is to advance and demonstrate a "plug and play" building energy microgrid concept for integrating energy storage, loads and sources at the building level with the external utility grid. The microgrid will be compatible with the Smart Grid concept, operate in grid parallel and islanding modes and seamlessly transition between these modes, while monitoring and managing energy usage and power quality levels. See Petition Answer 2 for more details of this project and specific stages.

### UTRC Expertise in the Field

UTRC delivers the advanced technologies, innovative thinking and disciplined research to the businesses of United Technologies Corporation (UTC). UTRC works directly with the UTC business units and outside partners to develop technology solutions that transition into product development. UTC has more than ten patent applications in the area of microgrids, power electronics and management of building system energy that will be utilized for this project. See Petition Answer 5. UTC is a supplier of Smart Grid products and services with its ComfortChoice® two-way demand response thermostats, ComfortChoice® Manager Web-based curtailment event management tool, EIKON® graphical programming tool, WebCTRL® and Otis ReGen™. See Petition Answer 6 for more details on these products. These and other tools will be utilized in this project.

UTRC's partner, the University of Wisconsin-Madison (UWM), has been actively developing microgrids and the Consortium for Electric Reliability Technology Solutions (CERTS). UWM holds two patents covering CERTS communications and controls schemes that are proposed to be integrated into this project. See Petition Answer 5.

### The Allocation of Patent Rights

UTRC has requested the worldwide rights in all inventions developed under this contract. The total budget for the two-year project is \$2,333,247 where UTC and its partner UWM are providing \$466,649 as their cost share equal to 20%. See Appendix, Petition Answer 3. In

addition, UTC has invested \$1M/year for the last five years in the area of building, controls and optimization and more than \$1M/year for the last five years in the area of power electronics, energy storage and energy management systems. A few years ago, UTC acquired Automatic Logic Corporation, a leader in Building Management Systems, whose main business is to provide products and services to monitor, visualize and control buildings and building systems. See Petition Answer 7.

UTC is currently a relatively minor player in the electrical energy generation and management field. If this project is successful, UTC hopes to increase the competition in this field in the U.S. and contribute to DOE's goals of increasing building energy use efficiency and reducing related green house gas emissions. See Petition Answer 10.

Due to UTC's success in this field, it is important for it to own, maintain and commercialize any inventions under this cooperative agreement. This will assist in advancing the US market and economy since UTC is a US company with manufacturing facilities in the United States. The patent rights waiver is subject to the retained government-use license, march-in rights, reporting requirements, 35 U.S.C. 204, and following DOE's standard U.S. Competitiveness provision:

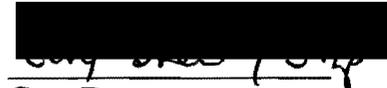
U.S. Competitiveness

The waiver recipient 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 waiver recipient can show to the satisfaction of DOE that it is not commercially feasible to do so. The waiver recipient 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.

Conclusion

UTRC was selected as the most qualified U.S. company capable of performing the tasks under this subcontract. The technology being developed in the subcontract is closely aligned with UTC's business and extensive research in this field. Therefore, the Government believes that the inventions created under this subcontract should be owned by UTRC for commercialization by its parent company UTC and its subsidiaries as being best to commercialize the technology and advance their products in this field.

For the foregoing reasons, 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.



Date: 1/28/2011

Gary Drew  
Assistant Chief Counsel for Intellectual Property  
DOE Chicago Office

Based on the foregoing Statement of Considerations, it is determined that the interests of the United States and the general public will best be served by waiver of the United States' domestic and foreign patent right as set forth herein, and therefore, the waiver is granted. This waiver shall not apply to a modification or extension of the UTRC contract where, through such modification or extension, the purpose, scope or DOE cost of the contract has been substantially altered. This waiver shall not affect any waiver previously granted.

CONCURRENCE:



Date: 7/15/11

Roland Risser  
Program Manager  
Office of the Building Technologies Program

APPROVED: /



Date: 7/19/2011

John Lucas  
Assistant General Counsel  
for Technology Transfer and Intellectual Property