Performance Validation of Advanced PHEV Vehicle

Final CRADA Report

Energy Systems

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Final CRADA Report

prepared by
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Participants: Chrysler Group, LLC

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Non Proprietary Final CRADA Report

Date: 12/20/16

CRADA Number: C1200201

CRADA Title: Performance Validation of Advanced PHEV Vehicle

CRADA Start/End Date: 07/02/12 to 04/06/15

Argonne Dollars: \$300,000

Participant Dollars: \$0

Argonne PI: Michael Duoba

Participant(s):

Chrysler Group, LLC \$0
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Complete Address

N/A \$
Name Participant Dollars

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DOE Program Lee Slezak, Vehicle Technologies Program
Manager:

Summary of Major Accomplishments:

Chrysler developed a PHEV minivan as part of a DOE contract to develop a production-ready PHEV prototype. Although conventional certification tests were conducted by Chrysler during their development, Argonne was brought in at the end of the development project to run their research-oriented benchmark testing on one of the prototype vehicles. Here are the accomplishments:

- Prototype vehicle was instrumented by removing some panels and installing voltage and current probes.
- Other signals such as temperature and setting up CAN network data collection.
- 42 drive cycle tests were run on the 4WD chassis dynamometer, in both CD and CS modes over UDDS, US06, HWY, SC03 cycles, and research cycles including steady-state

Summary of Major Accomplishments:

- Data was analyzed and summarized for DOE in an in-person briefing.

Summary of Technology Transfer Benefits to Industry:

Argonne's benchmark testing program is the perfect platform from which to leverage DOE research assets and institutional knowledge to evaluate the product of a substantial DOE-funded project. Testing methods and results were provided to both Chrysler and DOE. The standard PHEV testing protocols (still in early use) were exercised for this testing program. The procedures worked well and did not fail to work as intended with the blended-type depleting control design.

Other Information/Results: (Papers, Inventions, Software, etc.)

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