

**Electric Vehicle Wireless Power Transfer  
Industry Connections Activity Initiation Document (ICAID)  
Version: 1.3, March 16, 2015**

**IC13-002-04 Approved by the IEEE SASB 26 March 2015**

**1. Contact**

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**2. Type of Activity**

Entity Based

### **3. Purpose**

#### **3.1. Motivation and Goal**

This IEEE Standards Association Industry Connection Activity is related to pre-standardization efforts in the domain of Electric Vehicle Wireless Power Transfer with a particular focus on dynamic wireless charging as these efforts address the range limitation of electric vehicles as well as the cost aspect of the vehicle energy storage and complement the current standardization activities of the SAE (J2954) and IEC TC 69 which is centered on stationary charging.

#### **3.2. Related Work**

The standards SAE J 2954 (draft standard, wireless charging of Electric and Plug-In Hybrid Vehicles) and UL 2750 (wireless charging safety) are currently in development. Associated to SAE J2954 from a communication perspective are SAE J2847/6 (draft standard, wireless charging communication between Plug-In Electric Vehicles and the Utility Grid), SAE J2931/6 (draft standard, Digital Communication for Wireless Charging Plug-In Electric Vehicles) and SAE J2836/6 (Use Cases for Wireless Charging Communication between Plug-In Electric Vehicles and Utility Grid). The following roadmaps provide an overview about the standardization ecosystem that are relevant for the domain of electric vehicle wireless charging: ANSI EVSP Standardization Roadmap [www.ansi.org/evsp](http://www.ansi.org/evsp)  
German Standardization Roadmap for Electromobility  
<http://www.elektromobilitaet.din.de/cmd;jsessionid=F752FE51BB0E6F29AAC9BDE6062A3F84.1?level=tpl-home&languageid=en>  
There is no dedicated standardization activity being known that is directly related to dynamic wireless charging of electric vehicles.

#### **3.3. Potential Markets Served**

The main beneficiaries of the industry standards activity are Automotive OEM's, component suppliers (vehicle components, infrastructure components), infrastructure service providers (such as utilities) as well as information and communication technology companies. The group will identify future standardization needs and address these needs in its working documents to accelerate the subsequent standardization process and develop a technology framework that can be utilized to agree on within the standardization process. The key impact of the standards activity is to develop an eco-system of technology partners that support the electrification of the transportation sector.

### **4. Estimated Timeframe**

This activity will coincide with DOE funded research activities on wireless charging and is being synchronized with the ongoing standardization activities at SAE on wireless charging (J2954). The activity will be initialized with a F2F workshop and webinar planned to occur in the second quarter of 2013. After the completion of a

pre-standard document, the activity is expected to transfer over to a standards activity.

**Expected Completion/Review Date:** June 2016

## **5. Proposed Deliverables**

- IEVC forums (2013) and IEVC conference (2014) addressing wireless charging
- IEVC 2015 track days to showcase wireless charging technologies
- Analysis of standardization gaps in wireless charging (driven by ANSI)
- White paper for dynamic wireless charging
- White paper for testing dynamic wireless charging
- Guidelines for integrated system design of stationary and dynamic wireless charging
- Technology roadmap for EVWPT
- Develop PAR proposals for potential IEEE Standards (including what might go into SAE or others)

## **6. Funding Requirements**

Entity members will be asked to make a modest financial contribution to support the work of the activity. The funds will be utilized to organize workshops and test/showcase events and to potentially support travel of required experts in need of financial support.

## **7. Management and Procedures**

### **7.1. IEEE Sponsoring Committee**

Indicate whether an IEEE sponsoring committee of some form (e.g., an IEEE Standards Sponsor) has agreed to oversee this activity and its procedures.

**Has an IEEE sponsoring committee agreed to oversee this activity?:** No

If yes, indicate the sponsoring committee's name and its chair's contact information, and skip the remaining parts of this section (skip 7.2 and 7.3, below).

**Sponsoring Committee Name:** Committee Name

**Chair's Name:** Full Name

**Chair's Email Address:** who@where

**Chair's Phone:** Number, including country code

Additional sponsoring committee information, if any.

### **7.2. Activity Management**

This Industry Connections Activity will be self-governed by an Executive Committee and the Activity Members.

**7.3. Procedures**

A set of policies and procedures, based on the ICom Industry Connections Entity-Based Policies and Procedures baseline, has been developed and is being used.

**8. Participants**

**8.1. Stakeholder Communities**

University and Educational Institutions performing research in wireless electric vehicle charging.

Electric Utilities which would participate in EVWPT programs

Telecommunications companies which would facilitate wireless charging

Gov't Agencies (federal, state, municipal) involved with transportation infrastructure

Manufacturers of Electrical Vehicles

Manufacturers of dynamic and stationary EV charging systems and components

Road construction firms

**8.2. Expected Number of Participants**

Around 20-25 entities are currently being involved in this activity.

**8.3. Initial Participants**

<b>Entity</b>	<b>Primary Contact</b>	<b>Additional Representatives</b>
DOE	John Miller millerjm@ornl.gov	John Bobbitt <a href="mailto:John.bobbitt@srnl.doe.gov">John.bobbitt@srnl.doe.gov</a>
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Use the following table for an individual-based activity:

<b>Individual</b>	<b>Contact Information</b>	<b>Employer</b>	<b>Affiliation</b>
Name	Email Address Phone Number	Entity Name	Entity Name