

Ameren Illinois Company's  
Response to AG Data Requests  
Docket No. 12-0244  
AIC's Advanced Metering Infrastructure Plan  
Data Request Response Date: 8/1/2012

AG 4.02

Reference the Direct Testimony on Rehearing of Dr. Faruqui, page 12 line 268 to page 13 line 273.

- a. Please provide all supporting analyses and documentation for the \$9,500 premium associated with Plug-in Electric Vehicles (PEV) used in Dr. Faruqui's analysis.
- b. Please provide all supporting analyses and documentation for the premium declining rate associated with Plug-in Electric Vehicles (PEV) used in Dr. Faruqui's analysis.
- c. Do premium costs account for new fuel standards and associated technology costs? If so, please provide supporting documentation. If not, please explain why not.
- d. Are PEV premium costs reflected in Ameren Exhibits 5.6RH and 5.7RH? If so, please indicate where and what those values are in the exhibits. If not, please explain why not.
- e. Are hardware and installation costs associated with PEV charging included in Dr. Faruqui's analysis. If so, please provide PEV charging cost assumptions with supporting documentation for basis used in the analysis. If not, please explain why not.

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ILL. C. C. DOCKET NO. 12-0244  
 Exhibit No. 3  
 Witness: Ahmad Faruqui  
 Date 9-20-12 Reporter T. Gudge

**RESPONSE**

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 Title: Principal, The Brattle Group  
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- a. This value was based on consultations with technical experts and review of automotive literature, such as Deutsche Bank's 2008 study entitled "Electric Cars: Plugged In-Batteries must be included," which can be found at [http://www.inrets.fr/fileadmin/recherche/transversal/pfi/PFI\\_VE/pdf/deutch\\_bank\\_electric\\_cars.pdf](http://www.inrets.fr/fileadmin/recherche/transversal/pfi/PFI_VE/pdf/deutch_bank_electric_cars.pdf).

- b. This value was based on review of the automotive literature and consultations with technical experts. For example, one of the main factors affecting the price premium is the cost of batteries. Literature suggests that the cost of batteries will significantly decline in the coming years. An example of such sources is Deutsche Bank's 2009 study entitled, "Electric Cars: Plugged In 2-Batteries must be included," which can be found at <http://www.fullermoney.com/content/2009-11-03/ElectricCarsPluggedIn2.pdf>.

Another source is a Green Car Reports article entitled, "Electric-Car Battery Costs To Decline To \$200/kWh In 2020, McKinsey Says" (which can be found at [http://www.greencarreports.com/news/1077804\\_electric-car-battery-costs-to-decline-to-200-kwh-in-2020-mckinsey-says](http://www.greencarreports.com/news/1077804_electric-car-battery-costs-to-decline-to-200-kwh-in-2020-mckinsey-says)).

- c. Major automotive developments such as new fuel standards and associated technology costs are implicitly accounted for in the analysis.
- d. Yes, they are included in the cost estimates for the PEV sections in exhibit 5.6 and are reflected in the Net Benefits in Exhibit 5.7. For example, in the bottom table of Exhibit 5.6, the value of \$9,366,111 in the Gas column is the present value of the vehicle premium costs.
- e. Yes, we considered the cost of a standard level 1 charger (120 volts). This cost is included in the cost of a home energy management system (HEM). In our analysis, only participants under the TOU+PEV+HEMS program are eligible for AMI induced PHEVs. For this segment of the population, HEMs are only being used to charge electric vehicles.