Regulation Data Documentation

To accompany “Regulation Signal Data”

The operationalizing principle of V2G is that during the 22 hours (or

so) each day that your vehicle is not being driven it can be operating

in a commercial electrical market, and so earning you money. An

examination of electricity services markets indicates that the highest

value for V2G is that in Frequency Regulation. Frequency Regulation

(or simply 'regulation') can be described as responses on the part of

generators to rapid, unpredictable changes in load, and is provided by

grid operators (ISOs or RTOs) through a market mechanism. Potential

suppliers of the service make bids for upcoming time intervals of the

form 'We can provide X kW of frequency regulation' for $Y/hour'. The

grid operators sort the bids from lowest price to highest, and

contract with all suppliers at the price offered by the last supplier

needed to get the required quantity of regulation, known as the

"market clearing price". The regulation signal is generated by the

grid operator in response to changing loads, and is broadcast to those

market entities. In this data file, 10 consecutive days of the

regulation signal generated by PJM Interconnect are presented. The

first column is a date, in the format 'days after 12:00 am on the

first day'. The second column is the regulation signal normalized to

the range of -1:1.

Last updated July 2009 by Nat Pearre